



UNITED STATES SPECIAL OPERATIONS COMMAND

19960410 004

FISCAL YEAR 1997
BUDGET ESTIMATES

RDT&E, DEFENSEWIDE

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MARCH 1996

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UNITED STATES SPECIAL OPERATIONS COMMAND
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSEWIDE

March 1996

OVERVIEW

The United States Special Operations Command (USSOCOM) is a unified command with worldwide responsibilities to train, equip and maintain Special Operations Forces (SOF) in a ready state in support of the contingency plans developed by the five regionally oriented unified commands (USSEUCOM, USCENTCOM, USPACOM, USACOM, and USSOUTHCOM). When directed by the President, USCINCSOC will assume command of a special operation anywhere in the world. USSOCOM's Army component forces include special forces (Green Berets), Rangers, short to medium range infiltration/exfiltration aircraft, civil affairs specialists, and psychological operations specialists. Navy component forces consist of Sea, Air, & Land (SEAL) Teams and special boat units. The Air Force component forces consist of special operation units which provide medium to long range air infiltration/exfiltration aircraft, specially equipped gunships, and aerial refueling capability. USSOCOM is the only operational command directly responsible for determining its own force structure requirement, determining the related materiel requirements, procuring the SOF unique equipment, training, and deploying its own units.

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RDT&E DOCUMENTATION FOR FY 1997 AMENDED BUDGET ESTIMATES

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RDT&E DOCUMENTATION FOR FY 1997 AMENDED BUDGET ESTIMATES

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RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSEWIDE

PROGRAM ELEMENT COMPARISON SUMMARY

INTRODUCTION AND EXPLANATION OF CONTENTS

1. General. This document has been prepared to provide summary information on the United States Special Operations Command Research, Development, Test and Evaluation Program to Congressional committees during the FY 1997 Amended President's Budget hearings. RDT&E documentation includes:

- Project Listing by Program Element (PE).
- Exhibit R-1, Special Operations Command RDT&E Program.
- Exhibit R-2, RDT&E Budget Item Justification Sheet. These exhibits have been prepared under the following guidelines: R-2, paragraph A, is submitted for RDT&E PEs; R-2, paragraphs A through F, are submitted for each PE project resourced in the FY 1997 budget year. Acquisition strategies are provided for non-technology projects that have a one-to-one relationship with an acquisition program and for sub-projects funded at \$1.0 million or more in the budget year.
- Exhibit R-3, RDT&E Program Element / Project Cost Breakdown. An R-3 is provided for each advanced development project.
- 2. Comparison of FY 1996 and FY 1997 Data. A direct comparison of FY 1996 and FY 1997 data in the R-1 exhibit dated February 1995 will reveal only minor differences. FY 1997 - FY 2001 program has been reduced by 8.5%.
- 3. Relationship of FY 1997 Budget Structure to the FY 1996/1997 President's Budget Submitted to Congress. There are no project-level new starts since submission of the February 1995 President's Budget. Effective FY 1997, funds for two projects, "P204 Explosive Ordnance Disposal-Low Intensity Conflict" and "P205 Special Operations / Low Intensity Conflict Studies", transition to an Office of the Secretary of Defense-managed PE 0603122D, "Counterterror Technical Support".

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RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSEWIDE

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4. **Classification.** This supplement is unclassified.
5. **Table of Contents.** The Table of Contents is presented with summary documentation (R-33, Project Listing, and R-1) followed by R-2s and R-3s in Program Element order.
6. **Classified Programs.** Information on classified programs, PE 1160408BB, SOF Operational Enhancements, is provided under separate cover.

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PROJECT LISTING BY PROGRAM ELEMENT
(\$K, All Items in Budget Activity 7)

	March 1996					
	FY95	FY96	FY97	FY98	FY99	FY00
						FY01
PE 1160279BB Small Business Innovative Research	2,806	0	0	0	0	0
S050 Small Business Innovative Research						0
PE 1160401BB Special Operations Technology Development	5,448	3,969	4,083	4,173	4,267	4,361
S100 Special Operations Technology Development						4,457
PE 1160402BB Special Operations Advanced Technology Development	4,307	4,137	0	0	0	0
P204 Explosive Ordnance Disposal - Low Intensity Conflict	1,436	993	0	0	0	0
P205 Special Operations / Low Intensity Conflict Studies	7,149	9,985	7,927	8,105	8,287	8,469
PE 1160404BB Special Operations Special Technology						8,657
PE 1160404BB Special Operations Tactical Systems Development	3,647	492	484	1,436	14,251	769
D476 PSYOP Advanced Development	0	3,426	1,163	1,340	28,419	12,063
D615 SOF Aviation	10,829	6,488	4,006	5,746	11,660	16,866
SF100 Aviation Systems Advanced Development	32,574	30,863	18,993	11,921	4,473	4,479
S0417 Underwater Systems Advanced Development	3,520	9,189	2,960	3,541	2,488	5,948
S1684 SOF Surface Craft Advanced Development	29,339	12,109	6,567	7,879	3,990	13,274
3284 SOF Aircraft Defensive Systems	2,186	6,124	14,563	6,327	1,668	1,395
3326 AC-130U	40,624	18,034	4,339	243	238	0
3642 Aircrew Training System	2,557	9,456	7,439	5,656	4,092	3,824
S350 Special Operations Forces Planning and Rehearsal System						3,559

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PROJECT LISTING BY PROGRAM ELEMENT
(\$K, All items in Budget Activity 7)

	March 1996					
PROGRAM ELEMENT / PROJECT	FY95	FY96	FY97	FY98	FY99	FY00
S375 Weapons and Support Systems Advanced Development	0	150	1,986	2,204	1,760	3,453
S600 Future SOF Aircraft	0	0	0	446	12,050	20,273
S625 SOF Training Systems	0	2,437	9,759	11,985	8,103	9,333
S675 Sustainment Engineering	11,905	0	0	0	0	0
S700 Communications Advanced Development	4,138	1,457	2,648	2,064	3,421	2,487
S800 Munitions Advanced Development	11,458	7,639	9,016	3,212	2,740	9,775
S900 Miscellaneous Equipment Advanced Development	85	60	0	0	0	0
PE 1160405BB Special Operations Intelligence Systems Development	3,987	2,843	1,315	4,996	2,446	2,626
S400 SOF Intelligence						3,392
PE 1160407BB SOF Medical Technology Development	1,663	1,814	1,887	2,035	2,087	2,139
S275 SOF Medical Technology R&D						2,192
PE 1160408BB SOF Operational Enhancements	<u>20,060</u>	<u>16,156</u>	<u>23,216</u>	<u>18,584</u>	<u>22,031</u>	<u>22,151</u>
S500A Operational Enhancements	199,718	147,821	122,351	101,893	138,471	143,685
TOTAL:						160,592

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SPECIAL OPERATIONS COMMAND RDT&E PROGRAM

March 1996

Appropriation: 0400 D Research Development Test & Evaluation Defensewide

<u>Program Element #</u>	<u>Title</u>	<u>Budget Activity</u>	<u>FY 1995</u>	<u>FY 1996</u>	<u>FY 1997</u>	<u>Thousands of Dollars</u>
1160279BB	Small Business Innovative Research (U)	7	2,806	0	0	0
1160401BB	Special Operations Technology Development (U)	7	5,448	3,969	4,083	
1160402BB	Special Operations Advanced Technology Development (U)	7	12,892	15,115	7,927	
1160404BB	Special Operations Tactical Systems Development (U)	7	152,862	107,924	83,923	
1160405BB	Special Operations Intelligence Systems Development (U)	7	3,987	2,843	1,315	
1160407BB	SOF Medical Technology Development (U)	7	1,663	1,814	1,887	
1160408BB	SOF Operational Enhancements (U)	7	20,060	16,156	23,216	
Total Operational Systems Development:			199,718	147,821	122,351	
Total Special Operations Command:			199,718	147,821	122,351	

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE	
COST (in millions)	FY95	FY96	FY97
PE 1160279BB (Small Business Innovative Research	2.806	0	0
S050, Small Business Innovative Research	2.806	0	0

A. Mission Description and Budget Item Justification

The Small Business Innovative Research (SBIR) project is a highly competitive three phase award system which provides qualified small business concerns with the opportunity to propose high quality innovative ideas that meet specific research and development needs of USSOCOM. SBIR is a result of the Small Business Development Act of 1992. It was enacted by Congress in Public Law 97-219, reenacted by Public Law 99-443, and reauthorized by the SBIR Program Reauthorization Act of 1992. Starting in FY 1994, the SBIR program was refocused towards dual use and defense reinvestment efforts. Phase I projects evaluate the scientific technical merit and feasibility of an idea. Awards are up to \$100,000 with a maximum six month period of performance. Phase II projects expand the results of, and further pursue, the developments of Phase I. Awards are up to \$750,000 with a maximum two year period of performance. Phase III is for commercialization of the results of Phase II and requires the use of private or non-SBIR federal funding. DoD publishes government agency proposal projects twice per year for a consolidated DoD Request for Proposal. USSOCOM then awards its proposed SBIR projects.

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Exhibit R-2

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE							
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		MARCH 1996							
		R-1 ITEM NOMENCLATURE PE 1160401BB Special Operations Technology Development							
COST (in millions)		FY95	FY96						
		FY97	FY98						
		FY99	FY00						
		FY01	Cost to Complete						
			Total Cost						
PE 1160401BB (Special Operations Technology Development)	5.448	3.969	4.083	4.173	4.267	4.361	4.457	Cont.	Cont.
S100, Special Operations Technology Development	5.448	3.969	4.083	4.173	4.267	4.361	4.457	Cont.	Cont.

A. Mission Description and Budget Item Justification

Projects provide studies and laboratory prototypes for USSOCOM to link non-system basic research and exploratory development to Special Operations Forces (SOF) specific system engineering and manufacturing development and procurement. This project supports SOF, psychological and civil affairs forces involvement in foreign internal defense and world-wide operations. It also supports special operations forces conduct of special reconnaissance and direct action operations in low, mid, and high intensity conflict. A major objective of the SOF technology base program is to provide a balanced effort of studies and technology base funding across the exploratory research and advanced development categories in order to exploit technological developments of other organizations through aggressive resource leveraging. This resource leveraging (applying small incremental amounts of USSOCOM funding on top of significantly larger research investments by other DOD, government, and commercial organizations) will allow USCCINCSOC to influence the direction of technology development or the schedule against which it is being pursued.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	MARCH 1996 R-1 ITEM NOMENCLATURE / PROJECT NO. PE 116040IBB Special Operations Technology Development / Project S100

COST (In Millions)	FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost
S100, Special Operations Technology Development	5.448	3.969	4.083	4.173	4.267	4.361	4.457	Cont.	Cont.

A. Mission Description and Budget Item Justification

This project provides studies and laboratory prototypes for exploratory and advanced development, as well as a means for leveraging other organizations' projects that may not otherwise be affordable within MFP-11. Applying small incremental amounts of investments to DoD, other government agencies, and commercial organizations allows United States Commander-in-Chief Special Operations Command to influence the direction of technology development or the schedule against which it is being pursued and to acquire emerging technology for Special Operations Forces (SOF). This program supports special reconnaissance, information warfare, unconventional warfare, direct action, foreign internal defense, psychological and civil affairs operations, and other SOF missions worldwide. This program provides an investment strategy for USSOCOM to link non-systems technology opportunities to USSOCOM technology development objectives and mission area analyses. Sub-projects include:

- AC-130U Munitions/Weapons Enhancements. Comprehensive study of various gun systems/munitions technologies for mid-term and long-range gunship applications to increase capabilities, especially increased standoff. Identifies platform constraints; performs systems analysis and trade-off studies; conducts technology risks assessments and influences/leverages Service efforts.
- Advanced Sniper Weapon Fire Control. Full wind vector ballistic solution at extended range (1200 meters).
- Audio Deception Emitter. Brassboard audio emitter to mimic low frequency audio emissions.

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APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	DATE	MARCH 1996
RDTE, DEFENSEWIDE / 7	PE 1160401BB Special Operations Technology Development / Project S100		
<ul style="list-style-type: none"> ● Battle Dress System. Development of various functional modules with the battle uniform. ● Diver Integral Magnetic Mine Detector. A magnetometer array to reduce the false alarm rate and increase the effectiveness of a swimmer using a hand-held sonar for very shallow water mine countermeasures. ● Head-Mounted Thermal Vision. Lightweight, low-volume, low-power thermal viewer providing a passive night/obscured vision capability using an uncooled focal plane array. This project leverages other government efforts. ● Improved Special Operations Forces (SOF) Power Sources. Study of existing and emerging high power density battery concepts and related power source technologies. ● Individual Operational Ration. An automated capability to structure rations to meet mission requirements. ● Limited Effects Weapons. Investigate and define SOF needs and deficiencies in alternate applications of less than lethal force applications in order to identify technologies for use by SOF. ● Man-Portable Non-Line-of-Sight Weapon System. A lightweight, low observable, extremely accurate weapon designed for clandestine interdiction at ranges up to 5 kilometers. ● Maximum Efficiency Language Training. Joint project with Army Research Institute and Advanced Research Projects Agency to demonstrate an advanced computer based virtual reality interactive language tutor. ● Pursuit Deterrent Munitions (PDM) Trainer. A PDM simulator for safe training. ● Signature Control Technologies. Enhance the ability of SOF to remain undetected. 			

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160401BB Special Operations Technology Development / Project S100
<ul style="list-style-type: none"> ● SOF Enhanced Moldable Explosive Charge. An improved formulation, higher energy density replacement for C-4 explosive. ● Target Marking Technologies. Tagging/marking technologies for use by Special Operations Forces (SOF) to provide tracking and clandestine marking of targets. ● Underwater Electromagnetic Designator. A low probability of intercept underwater magnetic beacon that can be adapted for communications or path marker. 	
<p>FY 1995 ACCOMPLISHMENTS:</p> <ul style="list-style-type: none"> ● (\$1,405K) Completed evaluation and transition of the AC-130U Munitions/Weapons Enhancements, the basic Battle Dress System, Advanced Sniper Weapon Fire Control System, and the Diver Integral Magnetic Mine Detector. ● (\$665K) Completed development of the Individual Operational Ration, Man-Portable Non-Line-of-Sight Weapon System, SOF Enhanced Moldable Explosive Charge, and Underwater Electromagnetic Designator. ● (\$1,100K) Continued development of Improved SOF Power Sources and Target Marking Technologies, and Pursuit Deterrent Munition Trainer. ● Started development of the following new sub-projects: <ul style="list-style-type: none"> ● (\$1,611K) Signature Control Technologies. Technologies to enhance the ability of SOF to remain undetected. ● (\$181K) Head Mounted Thermal Vision. Demonstrate an ultra-light, low-volume, low-power, helmet mounted thermal viewer utilizing an advanced infrared focal plane array. Project leverages other government efforts. 	

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160401BB Special Operations Technology Development / Project S100	DATE MARCH 1996	
<p>(\$57K) Maximum Efficiency Language Training. Demonstrate advanced system to improve automated language training process.</p> <p>(\$429K) Future Force Applications Weapons Technologies. Conduct a Limited Effects Weapons study to determine technologies that provide Special Operations Forces (SOF) personnel with less lethal capabilities to precisely or temporarily disable selected targets. This will form the baseline for other government agencies' technology efforts to support SOF.</p>			
<p>FY 1996 PLAN:</p> <ul style="list-style-type: none"> ● (\$1,087K) Continue development of the Signature Control Technologies, Maximum Efficiency Language Training, Head-Mounted Thermal Vision, Pursuit Deterrent Munition Trainer, and Target Marking Technologies. ● (\$152K) Audio Deception Emitter. Start brassboard prototypes that would provide spot and large area loudspeaker broadcast capability to influence target audiences with high quality audio deception. ● (\$480K) Demonstrate technologies to remotely detect, characterize, and type classify mines, obstacles, and barriers found in the littoral warfare region. ● (\$425K) Conduct Concept Exploration. Conduct studies to assess optimum gas turbine engine alternatives for SOF maritime craft and optimum operating characteristics of a vehicle-mounted, crew-served weapon system. ● (\$1,825K) Classified Project. 			

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160401BB Special Operations Technology Development / Project S100

FY 1997 PLAN:

- (\$1,392K) Special Operations Forces (SOF) Command, Control, Communications, Computer, and Intelligence (C4I) Technologies. Complete development and evaluation of the Head-Mounted Thermal Vision and Target Marking technologies. Leverage U.S. Navy advanced technology demonstration for Color Night Vision Fusion to develop a SOF brassboard prototype of infrared and low-light-level video using artificial color that incorporates SOF size, weight, and human factors requirements.
- (\$485K) SOF Mobility Technologies. Develop an Active Noise Cancellation system to reduce noise levels from and onboard SOF propeller aircraft.
- (\$535K) SOF Weapons Technologies. Develop a Safe Low Energy Detonator to provide SOF with a safe explosive initiation system that could withstand sudden impact or extreme heat.
- (\$365K) SOF Sustainment Technologies. Complete development and begin evaluation of the Maximum Efficiency Language Training prototype. Complete development and evaluation of the Audio Deception Emitter. Assess / study past and current efforts / technologies for Enhanced Thermal Protection to provide passive protection for SOF combat swimmers during underwater operations in cold water.
- (\$483K) Demonstrate technologies to remotely detect, characterize, and type classify mines, obstacles, and barriers found in littoral warfare region.
- (\$623K) Concept Exploration Studies. Conduct studies to analyses the optimum technology concept for an integrated sensor navigation system and a remote command detonation device in support of the Naval Special Warfare Mine Countermeasures Program.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	DATE	MARCH 1996
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.			
RDT&E, DEFENSEWIDE / 7	PE 1160401BB Special Operations Technology Development / Project S100			
<ul style="list-style-type: none"> (\$200K) Technology Development Exploitation. Exploit emerging technologies to meet critical Special Operations Forces (SOF) requirements and encourage industry and government lab participation in identifying enhancements to SOF in critical areas such as reducing size and weight, and improving the life of power supplies. Needs in these areas will be advertized to industry and government research and development agencies via broad area announcements, calls for white papers, and research and development conferences. 				
ACQUISITION STRATEGY:	NA			
B. Program Change Summary				
Previous President's Budget		FY95	FY96	FY97 Total Cost
Appropriated Value		5.511	4.090	6.554 Cont.
Adjustments to Appropriated Value / President's Budget		5.560	4.090	
Current Budget Submit		(.112)	(.121)	(2.471)
Change Summary Explanation:		5.448	3.969	4.083 Cont.
<p>Funding: FY 1995 decrease is for Congressional reduction of Defensewide RDT&E for travel, civilian pay and a directed Department of Energy reprogramming, and assessment to execute mandated programs. The FY 1996 decrease is for Congressional inflation adjustments and overhead / management savings. The FY 1997 decrease is to fund higher priority MFP-11 requirements and to meet fiscal guidance and for the repricing of budgets to reflect the Administration's revised economic assumptions forecast.</p>				

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APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	DATE MARCH 1996
R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160401BB Special Operations Technology Development / Project S100	
Schedule:	None.
Technical:	None.
C. Other Program Funding Summary NA.	
D. Schedule Profile NA.	

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE					
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7			R-1 ITEM NOMENCLATURE PE 1160402BB Special Operations Advanced Technology Development							
COST (in millions)		FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost
PE 1160402BB (Special Operations Advanced Tech Dev)	12.892	15.115	7.927	8.105	8.287	8.469	8.657	8.657	Cont.	Cont.
P204, Explosive Ordnance Disposal - Low Intensity Conflict	4.307	4.137	0	0	0	0	0	0	0	21.495
P205, Special Operations / Low Intensity Conflict Studies	1.436	.993	0	0	0	0	0	0	0	3.880
S200, Special Operations Special Technology Development	7.149	9.985	7.927	8.105	8.287	8.469	8.657	8.657	Cont.	Cont.

A. Mission Description and Budget Item Justification

Projects provide studies, technology demonstrations and rapid prototyping efforts to provide technology and prototypes to accelerate the acquisition of Special Operations Forces-peculiar equipment. Technology goals are generated annually by USSOCOM with input from components and regional Commanders-in-Chief.

Projects P204 and P205 transition to the USD-managed PE 0603122D, "Counterterror Technical Support", in FY 1997.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE								
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE / PROJECT NO.								
RDT&E, DEFENSEWIDE / 7		PI 1160402BB Special Operations Advanced Technology Development / Project S200								
COST (In Millions)		FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost
S200, Special Operations Special Technology		7.149	9.985	7.927	8.105	8.287	8.469	8.657	Cont.	Cont.

A. Mission Description and Budget Item Justification

Special Operations Special Technology (SOST) is an advanced technology development program capable of rapid development and evaluation of prototypes to apply emerging advanced technologies against Special Operations Forces (SOF) deficiencies. It also provides for SOF-peculiar advanced technology demonstrations. A SOST sub-project ends once the prototypes undergo user assessments in an operational environment and a transition package is prepared. A transition package assists in the initiation of or insertion into an acquisition program. The program also addresses projects that are a result of unique joint, special mission, or area-specific needs for which a few-of-a-kind prototypes must be developed on a rapid response basis, or are of sufficient time sensitivity to accelerate the prototyping effort of a normal acquisition program in any phase. Sub-projects include:

- Advanced Sniper Weapon Fire Control. Full wind vector ballistic solution at extended range (1200 meters).
- Structural Usage Monitor System. Demonstrate accurate flight regime algorithms to extend aircraft component lives.
- Clandestine Lighting Systems. Ground- and air-based lighting system(s) that operate at the Generation III maximum sensitivity line and focused to a tight beam.
- Communications Helmet. Lightweight, protective headgear with integrated communications for use by SOF during small boat, repelling, and parachute operations.
- Craft Identification Friend or Foe (IFF). Low-cost craft positioning system for incorporating situational awareness and IFF on

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	DATE
RDTE, DEFENSEWIDE / 7	PI 1160402BB Special Operations Advanced Technology Development / Project S200	MARCH 1996
<p>Special Operations Forces (SOF) craft.</p> <ul style="list-style-type: none"> ● Decompression Monitor. Time and depth monitor for use in SEAL Delivery Vehicle operations to extend the range of missions. ● Integrated Bridge System. A system that enhances maritime craft bridge-console and operator interface through human factors engineering and integration with console design and displays. ● Tactical Communications Management System. A drop-in wireless radio management system and intercom for use in SOF craft. ● Hasty Hide Shelter. Lightweight, weatherproof, "quick hide" shelter for SOF personnel providing protection from detection. ● Low Observable Demonstrations. Prototypes of emerging signature reduction and anti-detection technologies. ● Inter/Intra Team Low-Power Communications. Electro-optic and low probability intercept/low probability detect communication devices for SOF applications. ● Limited Effects Submunition. Project leverages Service efforts to provide less-than-lethal delivery capabilities onboard SOF aircraft. ● Psychological Operations Leaflet Payload. Leaflet delivery system to support psychological operations. ● Quick Erect Antenna. Improved antenna to reduce set-up time requirements in support of psychological operations. ● Remote Miniature Weather Station. Man-portable, air-drop capable weather sensors with a transmission system for terrestrial 		

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160402BB Special Operations Advanced Technology Development / Project S200
<p>based unattended weather collection operations.</p> <ul style="list-style-type: none"> ● Special Operations Forces (SOF) Demolition Kit. Equipment to attach, initiate, and control military effects of explosives for SOF applications. ● Special Operations Information Warfare Support System. Automated system for civil affairs and psychological operations information support. ● SOF Enhanced Weapons. Weapons and munitions prototypes for increased range, improved accuracy, and improved performance against hardened targets. ● Thermal Imaging Device. Eliminate bore sight problems in ground laser target designation missions. ● Transport Cradles. Equipment to transport watercraft in military aircraft. ● Very Slender Vessel Technologies. Demonstrate advanced technologies to minimize signature and wave-shock impact to personnel onboard SOF maritime craft. ● Weapons Control System. Prototype providing improved accuracy for small arms mounted on SOF water craft. <p>FY 1995 ACCOMPLISHMENTS:</p> <ul style="list-style-type: none"> ● (\$689K) Completed evaluation and transitioned the Mobile Broadcast Extender Radio System, Craft Identification Friend or Foe, and SOF Demolition Kit. ● (\$2,071K) Completed the Tactical Communications Management System, Low Observable Demonstrations, Transport Cradles, 	

UNCLASSIFIED	RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE	MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160402BB Special Operations Advanced Technology Development / Project S200		

Thermal Imaging Device, and Psychological Operations Leaflet Payload.

- (\$2,708K) Continued development of the Advanced Sensors, Inter/Intra Team Low Power Communications, Special Operations Information Warfare Planning System, Communications Helmet, Decompression Monitor, Laser Defense, and Weapons Control System.
 - (\$412K) Began development of a miniature remote weather station.
 - (\$721K) Began technology demonstration of a lightweight outboard motor by integrating advanced materials.
 - (\$400K) Began development of enhanced Special Operations Forces (SOF) weapon and munition prototypes for increased range, improved accuracy, and improved performance against hardened targets.
 - (\$148K) Technology Exploitation Initiative. Exploited emerging technologies to meet critical SOF requirements and encourage industry and Government Lab participation in identifying enhancements to SOF in critical areas. Need in these areas have been advertised to government research and development agencies and industry via Broad Agency Announcements and research and development conferences.
- FY 1996 PLAN:
- (\$375K) Complete evaluation and transition the Tactical Communications Management System, Laser Defense, Special Operations Information Warfare Support System, and Transport Cradles.
 - (\$4,673K) Continue efforts on the Advanced Sensors, Inter/Intra Team Low Power Communications, Decompression Monitor, Miniature Remote Weather Station, Improved SOF Power Sources, SOF Enhanced Weapons, Advanced Sniper Weapon Fire Control System (in project S100 prior to FY 1996), Communications Helmet, and Weapons Control System.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	DATE		
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	MARCH 1996			
RDTE, DEFENSEWIDE / 7	PE 1160402BB Special Operations Advanced Technology Development / Project S200				
(\$3,837K) Conduct advanced technology demonstrations in the following areas:					
<ul style="list-style-type: none"> ● Special Operations Forces (SOF) Survival Sustainment and Personal Equipment. Specifically, a lightweight, low profile, Hasty Hide Shelter to provide SOF personnel with environmental and camouflage protection. ● Advanced Technologies for SOF Mobility Platforms. Specifically, technologies for Clandestine Lighting Systems to assist SOF aircraft with landings at night, technologies for an Integrated Bridge System to integrate current console functions onboard SOF watercraft while protecting the components and improving human factors, and Very Slender Vessel technologies to minimize SOF maritime craft' signature and the wave-shock impact to personnel onboard. ● Controlled-Effects Weapons Technologies. Specifically, leverage with Service efforts for a "Limited Effects" Submunition to provide less-than-lethal delivery capabilities onboard SOF aircraft. ● Advanced Technologies for Deception, Information Warfare. Specifically, technologies for a Quick Erect Antenna to reduce size and improve set-up time requirements of antenna in support of psychological operations transmissions. ● SOF Command, Control, Communications, Computer, and Intelligence (C4I) Technologies. Demonstrate millimeter wave technology to provide small, low power, clandestine, high data rate communications link for audio and video transmissions. ● (\$450K) Leverage U.S. Army efforts to develop flight regime recognition algorithms with sufficient accuracy to allow replacement of fatigue critical aircraft components based upon actual aircraft usage versus predicted design usage. ● (\$650K) Classified project. 					

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE	MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160402BB Special Operations Advanced Technology Development / Project S200	
FY 1997 PLAN:		
<ul style="list-style-type: none"> ● (\$1,175K) SOF C4I Technologies. Complete evaluation and transition of the Advanced Sensors and Inter/Intra Team Low Power Communications. Continue advanced technology demonstration of the Remote Weather Station. Complete development and begin evaluation of the Quick Erect Antenna. ● (\$2,892) Special Operations Forces (SOF) Mobility Technologies. Complete user evaluation and transition the Clandestine Lighting System. Complete demonstration and begin user evaluation of the Integrated Bridge System and Very Slender Vessel technologies. Continue development of Structural Usage Monitor System. Demonstrate an Aircraft Off/On Load System to provide SOF with the capability to off/on load air-drop platforms or SOF-unique pallets without the use of material handling equipment. ● (\$1,815K) SOF Weapons Technologies. Complete development and begin user evaluation of Weapons Control System, SOF Enhanced Weapons, and Advanced Sniper Weapon Fire Control. Leverage U.S. Air Force Sensor Hardening efforts to develop generic laser protection modules for SOF electro-optic devices. ● (\$1,345K) SOF Sustainment Technologies. Complete user evaluation and begin transition of the Communications Helmet. Complete development and begin user evaluation of the Hasty Hide Shelter. Demonstrate an Intrusion Sensor System to provide the SOF operator with the capability to detect local threats. Demonstrate a Portable Oxygen Charging System to reduce the SOF logistics support required (while forward deployed) for underwater breathing apparatuses. ● (\$500K) Technology Exploitation Initiative. Exploit emerging technology to meet critical Special Operations Forces (SOF) requirements and encourage industry and Government Lab participation in identifying enhancements to SOF in critical areas. Need in these areas have been advertised to industry and government research and development agencies via Broad Agency Announcements and research and development conferences. 		

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	DATE	MARCH 1996																									
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.																												
RDT&E, DEFENSEWIDE / 7	PE 1160402BB Special Operations Advanced Technology Development / Project S200																												
<ul style="list-style-type: none"> • (\$200K) Classified project. 																													
<p>ACQUISITION STRATEGY: NA</p> <p>B. Program Change Summary</p> <table> <tr> <td>Previous President's Budget</td> <td>FY95</td> <td>FY96</td> <td>FY97</td> <td>Total Cost</td> </tr> <tr> <td>Appropriated Value</td> <td>7.719</td> <td>7.943</td> <td>8.222</td> <td>Cont.</td> </tr> <tr> <td>Adjustments to Appropriated Value / President's Budget</td> <td>7.788</td> <td>10.443</td> <td></td> <td></td> </tr> <tr> <td>Current Budget Submit</td> <td>(.570)</td> <td>(.458)</td> <td>(.295)</td> <td></td> </tr> <tr> <td>Change Summary Explanation:</td> <td>7.149</td> <td>9.985</td> <td>7.927</td> <td>Cont.</td> </tr> </table> <p>Funding: FY 1995 reduction is due to a Congressional cut of Defensewide RDT&E for travel, civilian pay and a directed Department of Energy reprogramming, and assessments for mandated programs and higher priority USSOCOM requirements. The FY 1996 adjustments reflect a Congressional add and reductions due to Congressional inflation adjustments and overhead/management savings and a decrease for revised OMB economic assumptions. The FY 1997 decrease is to fund higher priority MFP-11 requirements and to meet fiscal guidance and for repricing of budgets to reflect the Administration's revised economic assumptions forecast.</p> <p>Schedule: None.</p> <p>Technical: None.</p>					Previous President's Budget	FY95	FY96	FY97	Total Cost	Appropriated Value	7.719	7.943	8.222	Cont.	Adjustments to Appropriated Value / President's Budget	7.788	10.443			Current Budget Submit	(.570)	(.458)	(.295)		Change Summary Explanation:	7.149	9.985	7.927	Cont.
Previous President's Budget	FY95	FY96	FY97	Total Cost																									
Appropriated Value	7.719	7.943	8.222	Cont.																									
Adjustments to Appropriated Value / President's Budget	7.788	10.443																											
Current Budget Submit	(.570)	(.458)	(.295)																										
Change Summary Explanation:	7.149	9.985	7.927	Cont.																									

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7-	MARCH 1996
R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160402BB Special Operations Advanced Technology Development / Project S200	
C. Other Program Funding Summary	NA.
D. Schedule Profile	NA.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		R-1 ITEM NOMENCLATURE		DATE		MARCH 1996				
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		PE 1160404BB Special Operations Tactical Systems Development								
COST (in millions)		FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost
PE 1160404BB Special Operations Tactical Systems Development		152.862	107.924	83.923	64.000	99.353	103.939	119.046	Cont.	Cont.
D476, PSYOPS Advanced Development		3.647	.492	.484	1.436	14.251	.769	0	0	26.738
D615, SOF Aviation	0	3.426	1.163	1.340	28.419	12.063	.935	Cont.	Cont.	Cont.
SF100, Aviation Systems Advanced Development	10.829	6.488	4.006	5.746	11.660	16.866	29.921	Cont.	Cont.	Cont.
S0417, Underwater Systems Advanced Development	32.574	30.863	18.993	11.921	4.473	4.479	4.765	Cont.	Cont.	Cont.
S1684, SOF Surface Craft Advanced Development	3.520	9.189	2.960	3.541	2.488	5.948	.678	Cont.	Cont.	Cont.
3284, SOF Aircraft Defensive Systems	29.339	12.109	6.567	7.879	3.990	13.274	11.048	Cont.	Cont.	Cont.
3326, AC-130U	2.186	6.124	14.563	6.327	1.668	1.395	1.384	6.699	353.934	
3642, Aircrew Training Systems	40.624	18.034	4.339	.243	.238	0	0	0	0	205.006
S350, Special Operations Forces Planning and Rehearsal System	2.557	9.456	7.439	5.656	4.092	3.824	3.559	Cont.	Cont.	Cont.
S375, Weapons and Support Systems Advanced Development	0	.150	1.986	2.204	1.760	3.453	2.543	Cont.	Cont.	Cont.
S600, Future SOF Aircraft	0	0	0	.446	12.050	20.273	46.311	Cont.	Cont.	Cont.
S625, SOF Training Systems	0	2.437	9.759	11.985	8.103	9.333	1.871	Cont.	Cont.	Cont.
S675, Sustainment Engineering	11.905	0	0	0	0	0	0	0	0	21.494
S700, Communications Advanced Development	4.138	1.457	2.648	2.064	3.421	2.487	4.113	Cont.	Cont.	Cont.
S800, Special Operations Munitions Advanced Development	11.458	7.639	9.016	3.212	2.740	9.775	11.918	Cont.	Cont.	Cont.
S900, Special Operations Miscellaneous Equipment Development	.85	.60	0	0	0	0	0	0	0	8.379

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE	MARCH 1996		
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development				
<p>A. Mission Description and Budget Item Justification</p> <p>Projects provide for development, testing, and integration of specialized equipment to meet the unique requirements of Special Operations Forces (SOF). Specialized equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. These operations are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy. SOF must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to threat forces to ensure mission success.</p>					

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project D476

COST (In Millions)	FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost
D476, PSYOP Advanced Development	3.647	.492	.484	1.436	14.251	.769	0	0	26.738

A. Mission Description and Budget Item Justification

The intent of Psychological Operations (PSYOP) is to persuade selected target audiences to support US national interests and to counter misinformation directed at US forces. Equipment deficiencies exist which seriously threaten the ability of USSOCOM forces to produce and disseminate PSYOP products. This project resources a level of effort to replace much of the 1950s and 1960s technology equipment currently employed and to provide enhanced capability to conduct tactical and theater level PSYOP dissemination in support of regional unified commanders and their deployed task forces. Sub-projects include:

- Deployable Print Production Center (DPPC). DPPC is a rapidly deployable, state-of-the-art computerized digital system capable of creating, editing and producing printed PSYOP products in forward locations and remote sites.
- Family of Loudspeakers (FOL). The FOL will be deployed by PSYOP Loudspeaker Teams and Mobile Audio/Visual Teams to target areas in support of Special Operations Forces and conventional forces. FOL will permit the conduct of loudspeaker missions over larger areas than present equipment capability allows and will provide a greater stand-off distance for US forces/assets. The FOL will consist of modular amplifiers and speakers that will provide high quality recorded audio, live dissemination, and limited acoustic deception capability. Amplifiers and speakers will be transported, operated, and mounted in ground vehicles, watercraft, rotary wing aircraft, and dismounted for ground operations (tripod/manpack). The basic system, or manpack, is comprised of a modular amplifier and modular speaker(s) weighing 35 lbs or less.
- Leaflet Delivery Systems (LDS). LDS develops a family of leaflet delivery systems, primarily non-developmental acquisitions

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project D476	
<p>which will provide Psychological Operations (PSYOP) personnel the ability to disseminate large quantities of leaflets in a wide range of scenarios including denied areas. LDS will be non-lethal, low radar cross-section systems which will not present a military threat that could provoke hostilities. LDS will provide overt and deniable methods of leaflet dissemination to be utilized across the operational continuum. One system currently available off-the-shelf consists of two subsystems: dissemination and launch. The dissemination subsystem will consist of a balloon carrier/vehicle and a leaflet release device capable of being preprogrammed for altitude release point. The launch subsystem will provide for logistical and weather programming. LDS will also include technologically advanced methods of leaflet dissemination, including unmanned aerial vehicle payloads.</p> <ul style="list-style-type: none"> • Special Operations Media System (SOMS) A. SOMS A is an extended range strategic / operational level radio / TV broadcast system, based on experience gained with the tactical SOMS B. SOMS A is capable of disseminating PSYOP products to a theater-wide audience. SOMS A will record, produce and broadcast PSYOP products and transmit / receive programming material via satellite communications with the fixed-site Media Production Center, tactical SOMS B systems and Commando Solo aircraft. Satellite communications will be used to obtain rapid approval of PSYOP products for dissemination in response to quickly changing mission scenarios, to forward products produced and approved in the continental United States to SOMS A for dissemination. • Special Operations Media System (SOMS) B. SOMS B is a rapid deployable, C-130 drive on/drive off tactical radio/TV broadcast, reception and electronic news gathering system. This system replaces 1950-1960s technology and enhances the capability to conduct tactical level PSYOP dissemination in support of regional unified commanders. It reduces the airlift requirement. <p>FY 1995 ACCOMPLISHMENTS:</p> <ul style="list-style-type: none"> • (\$3,547K) FOL. Demonstrated/validated critical technologies; released request for proposal to industry; conducted source selection for prototype contract award with production options, and issued revised request for proposal. 		

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project D476
<p>• (\$100K) Special Operations Media System (SOMS) B. Support for safety and transportability certification testing at Aberdeen Test Center.</p> <p>FY 1996 PLAN:</p> <ul style="list-style-type: none"> • (\$289K) Deployable Print Production Center (DPPC). Conduct Milestone 0/II review. Conduct surveys and evaluate non-developmental item equipment based on operator evaluation of the DPPC prototype developed as a Special Operations Special Technology project. • (\$203K) SOMS B. Provides continued test and logistics support. <p>FY 1997 PLAN:</p> <ul style="list-style-type: none"> • (\$291K) SOMS A. Conduct Milestone 0 review. Begin research and development efforts with analysis of SOMS B lessons learned and survey of available non-developmental item equipment. Update SOMS A concept study. • (\$193K) Leaflet Delivery System. Conduct Milestone 0 review. Conduct market survey to determine potential vendors and potential proof-of-concept. Update LDS concept study. <p>ACQUISITION STRATEGY: NA.</p>	

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APPROPRIATION / BUDGET ACTIVITY			
RDT&E, DEFENSEWIDE / 7			
R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project D476			
B. Program Change Summary			
Previous President's Budget	FY95	FY96	FY97
Appropriated Value	3.620	.295	1.095
Adjustments to Appropriated Value / President's Budget	3.620	.295	
Current Budget Submit	.027	.197	(.611) (1.073)
Change Summary Explanation:	3.647	.492	.484 26.738
Funding:	This project contains several sub-projects. FY 1995 net increase is due to reductions for Congressional Defensewide RDT&E for travel, civilian pay, a directed Department of Energy reprogramming, and Small Business Innovative Research cost share, and an increase in Special Operations Media System (SOMS) B testing costs. The FY 1996 net increase is the result of a Congressional reduction for inflation adjustments and overhead/management savings and an increase in SOMS B testing cost. FY 1997 decrease is to fund higher priority MFP-11 requirements and reductions due to repricing of budgets to reflect the Administration's revised economic assumptions forecast.		
Schedule:	SOMS B Milestone III rescheduled from 2QTR96 to 2QTR97 due to additional time required for delivery of AM and TV transmitters and AM antenna. Family of Loudspeakers (FOL) basic prototype contract award with production options will occur 2QTR96 after release of revised solicitation. FOL Milestone III will occur 3QTR97.		
Technical:	None.		

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APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project D476					
C. Other Program Funding Summary							
	FY95	FY96	FY97	FY98	FY99	FY00	FY01
PROC, Psyop Equipment	.018	19.595	7.794	7.595	4.726	14.686	1.986
	FY95	FY96	FY97	FY98	FY99	FY00	FY01
	1	2	3	4	1	2	3
D. Schedule Profile							
Special Ops Media System (SOMS) B							
MS III							x
Family of Loudspeakers							x
Basic Contract Award						x	
MS III						x	
Deployable Print Production Center							
MS 0						x	
MS VII						x	
MS III						x	
SOMS A MS 0						x	
Leaflet Delivery System MS 0						x	

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project D476	FY95	FY96
A. Project Cost Breakdown (\$ in thousands)		<u>FY97</u>	<u>FY97</u>
1. Family of Loudspeakers	3,547		
2. Deployable Print Production Center		289	
3. Leaflet Delivery System			193
4. Special Operations Media System - A			291
5. Special Operations Media System - B	100		203
TOTAL:	3,647	492	484

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)				DATE MARCH 1996			
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project D476					
B. Budget Acquisition History and Planning Information Performing Organizations				Actual or Budget Value (\$ in thousands)			
Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY95	Budget FY95	Budget to Complete
Product Development Organizations USSOCOM, Tampa FL Navy, OST, Ft Washington MD Army, CECOM, Ft Monmouth NJ DOE, Nat'l Engg. Lab, Idaho Falls ID	WR ALLOT ALLOT MPR	Var Jun 96 Var May 93		1,910 3,240	3,547	289 27	291 193
Support and Management Organizations Army MRSA, Lexington KY AMC USA, Redstone Arsenal AL	MMPR MMPR	May 93 Apr 94		53 161			
Test and Evaluation Organizations JITC, Ft Huachuca AZ Army ATC, Aberdeen Proving Gd MD	MMPR MMPR	Mar 94 Aug 94		202 93	100	146	
Government Furnished Property							
Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date	Total Prior to FY95	Budget FY95	Budget FY96	Budget to Complete
Subtotal Product Development				5,150	3,547	316	484
Subtotal Support and				214		30	
Subtotal Test and Evaluation				295	100	146	
Total Project				5,659	3,647	492	484
16,456 16,073 289 383 16,364 289 6,033 3,267							

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project D615	MARCH 1996

COST (In Millions)	FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost	Cont.
D615, SOF Aviation	3.426	1.163	1.340	28.419	12.063	.935				

A. Mission Description and Budget Item Justification

A requirement exists to provide aviation support to Special Operations Forces (SOF) in world-wide contingency operations and low-intensity conflicts. The specialized aircraft for these missions must be capable of rapid deployment and undetected penetration of hostile areas. These aircraft must be capable of operating at extended ranges under adverse weather conditions to infiltrate, provide logistics for, reinforce, and extract SOF. The threat is characterized by an extensive and sophisticated ground based air defense system and an upgraded air-to-air capability targeted against helicopters. Third World operations are apt to involve greater distances and more challenging geographical environmental conditions than the European theater. This project will develop/upgrade the Special Operations rotary wing aircraft systems that will be capable of successful operations in these increasingly hostile environments. Rotary wing systems supported by this project include: A/MH-6, MH-60G/L/K, MH-53J, TH-53A, and MH-47D/E. Efforts include:

- A/MH-6. Develop and test a Full Authority Digital Electronic Control for the Allison 250 C-30 turbine engine.
- MH-47E/MH-60K. (1) Develop and integrate Multi-Mode Radar software; (2) Develop software and hardware to accommodate Army funded common engineering change proposals for the CH-47D and UH-60L aircraft on SOF aircraft.
- MH-53J. (1) Upgrade the lamp for the ALQ-157 Infrared Countermeasures Set; (2) Develop and install software and hardware interfaces to allow flight line reprogramming of the ALQ-162 Electronic Countermeasures Jammer.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	UNCLASSIFIED
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	DATE	DATE
RDT&E, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project D615	MARCH 1996	MARCH 1996
FY 1995 ACCOMPLISHMENTS:			
<ul style="list-style-type: none"> ● Completed Multi-Mode Radar (MMR) development testing for MH-47E/MH-60K. Began MMR flight test qualification at Edwards Air Force Base. ● Achieved MH-47E/MH-60K aircraft fielding/material release/initial operational capability. 			
FY 1996 PLAN:			
<ul style="list-style-type: none"> ● (\$2,500K) A/MH-6. Develop and test a Full Authority Digital Electronic Control for the Allison 250 C-30 turbine engine. ● (\$534K) MH-53J. Develop improved infrared lamp for the ALQ-157 Infrared Countermeasures Set. Improved lamps will be introduced on an attrition basis. ● (\$392K) MH-53J. Develop software and hardware interfaces to allow flight line reprogramming of ALQ-162 Electronic Countermeasure Jammers. 			
FY 1997 PLAN:			
<ul style="list-style-type: none"> ● (\$1,163K) MH-47E/MH-60K. Develop software and hardware to accommodate U.S. Army funded common engineering change proposals for the CH-47D and UH-60L for SOF MH-47E/MH-60K aircraft. 			
ACQUISITION STRATEGY: NA.			

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE	
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE / PROJECT NO.	
RDT&E, DEFENSEWIDE / 7		PE 1160404BB Special Operations Tactical Systems Development / Project D615	
B.	Program Change Summary	FY95	FY96
	Previous President's Budget		.945
	Appropriated Value	3.445	
	Adjustments to Appropriated Value / President's Budget	(.019)	1.163
	Current Budget Submit	3.426	
			Cont.
Change Summary Explanation:			
Funding: FY 1996 increase reflects Congressional plus-up for the Full Authority Digital Electronic Control less Congressional inflation adjustment and overhead/management savings. FY 1997 increase funds new requirement described in FY 1997 Plan.			
Schedule:	None.		
Technical:	None.		

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APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	DATE	MARCH 1996
PE 1160404BB Special Operations Tactical Systems Development / Project D615			
C. Other Program Funding Summary			
PROC, HH-53	FY95 6.743	FY96 FY97	FY99 FY98
PROC, 47/60 Mods	7.839		FY00
PROC, Rot. Wing Upgds & Sustainment	8.415	4.788 6.106	18.803 61.491
			Cont.
			Total
D. Schedule Profile			
ALQ-157 Contract Award / MS II			FY95
ALQ-162 Contract Award / MS II	1	2	FY96
A/MH-6 FADEC Contract Award	3	4	FY97
Begin MH-47E/60K ECP Integration	1	2	
			Total

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE	MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project D615		
A. Project Cost Breakdown (\$ in thousands)	FY95	FY96	FY97
1. ALQ-157		534	
2. ALQ-162		392	
3. MH-47E / MH-60K ECP Engineering and Testing		1,163	
4. A/MH-6 FADEC		2,500	
TOTAL:		3,426	1,163

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RDTE & PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)				DATE MARCH 1996			
APPROPRIATION / BUDGET ACTIVITY RDTE, DEFENSEWIDE / 7				R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project D615			
B. Budget Acquisition History and Planning Information Performing Organizations				Actual or Budget Value (\$ in thousands)			
Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY95	Budget FY95	Budget to Complete
Product Development Organizations	Var	Var	Var	Var		399	399
ALQ-157, WR-ALC	Var	Var	Var	Var		256	256
ALQ-162, WR-ALC, NAS	Var	Var	Var	Var		2,500	2,500
MH-47E/60K, PM-TAPO	Var	Var	Var	Var		815	Cont.
FADEC, PM-MELB	Var	Var	Var	Var			
Support and Management Organizations	Var	Var	Var	Var		105	105
ALQ-157, WR-ALC	Var	Var	Var	Var		86	86
ALQ-162, WR-ALC	Var	Var	Var	Var		264	Cont.
MH-47E/60K, PM-TAPO	Var	Var	Var	Var			
Test and Evaluation Organizations	Var	Var	Var	Var		30	30
ALQ-157, SMOTEC	Var	Var	Var	Var		50	50
ALQ-162, SMOTEC	Var	Var	Var	Var		84	Cont.
MH-47E/60K, PM-TAPO	Var	Var	Var	Var			
Government Furnished Property							
Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date	Total Prior to FY95	Budget FY95	Budget FY97	Budget to Complete
Subtotal Product Development					3,155	815	Cont.
Subtotal Support and					191	264	Cont.
Subtotal Test and Evaluation					80	84	Cont.
Total Project					3,426	1,163	Cont.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project SF100	DATE	MARCH 1996
COST (In Millions)	FY95	FY96	FY97
SF100, Aviation Systems Advanced Development	10.829	6.488	4.006
	5.746	11.660	16.866
		29.921	Cost to Complete
			Total Cost Cont.

A. Mission Description and Budget Item Justification

This project investigates already developed and maturing technologies that have direct application for the development and procurement of specialized equipment to meet unique SOF aviation requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: Low Probability of Intercept/Low Probability of Detection (LPI/LPD) radio frequency radar; LPI formation/rendezvous flight; digital terrain elevation data and electronic order of battle; digital maps; LPI radar altimeter; display technology; situational awareness; near-real-time intelligence to include data fusion; laser radar/millimeter wave radar obstacle avoidance; imagery; threat detection and avoidance; electronic support measures for threat geolocation and specific emitter identification; navigation; target detection and identification technologies; light detection and ranging ballistic wind measurement technologies; and studies for future SOF aircraft requirements. Sub-projects include:

- AC-130 Light Detection and Ranging. Improves first-shot accuracy for AC-130H Gunships by measuring the wind at the target location real-time and using it in the fire control solution prior to first gunfire.
- AC-130H Low Light Level TV (LLLTV) Replacement. The LLLTV program modifies and/or redesigns critical high failure components and then installs these components into a turret. These components include AAQ-17 Laser Illuminator, the AXQ-17 Camera, and the AJQ-24 Pedestal.
- AC-130U/H Infrared Detection Set (IDS) Upgrade. Modifies the optics on the existing AN/AAQ-17 IDS and Enhanced AN/AAQ-17 IDS currently installed on 21 AC-130U/H aircraft. The modification will substantially increase the magnification and resolution of the IDS thus allowing the aircrew to identify friendlies/targets while operating outside the

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE	MARCH 1996	
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	PE 116040BB Special Operations Tactical Systems Development / Project SF100	
<p>range of threat systems.</p> <ul style="list-style-type: none"> ● Aviation Engineering Analysis. Provides a rapid response capability to support SOF fixed wing aircraft. The purpose is to correct systems deficiencies, improve asset life, and enhance mission capability through the means of feasibility studies and engineering analyses. The sub-project provides the engineering required to improve the design and performance integrity of the aircraft support systems, sub-systems equipment, and embedded computer software as they relate to the maintenance, overhaul, repair, quality assurance, modifications, material improvements and service life extensions. Prior to FY 1996 aviation engineering analysis was funded in RDT&E project S675, Sustainment Engineering. ● Low Probability of Intercept Penetration Aids. Selected technologies will be evaluated under a requirements analysis, a low probability of intercept/low probability of detection modeling study, and an Advanced Technology Demonstration (ATD) as approved by USCINCSOC on 4 August 1995. The ATD leverages existing avionics systems combined with previous Quiet Knight software to improve low probability of intercept capabilities. The study and ATD will help the assessment process. ● Ring Laser Gyro (RLG). Replaces outdated inertial navigation units with new RLG technology on MC-130E/H and AC-130H aircraft. This replacement increases the reliability and maintainability of the aircraft and enhances navigation and delivery capabilities. <p>FY 1995 ACCOMPLISHMENTS:</p> <ul style="list-style-type: none"> ● (\$2,530K) AC-130U/H Infrared Detection Set Upgrade. Awarded a sole source non-recurring engineering design contract to Texas Instruments. ● (\$100K) Aviation Engineering Analysis. Began a Phase 0 concept formulation study for the AC-130U Maintenance Trainer. 			

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	UNCLASSIFIED
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	DATE	DATE
RDT&E, DEFENSEWIDE / 7	PE 1166404BB Special Operations Tactical Systems Development / Project SF100	MARCH 1996	MARCH 1996
<ul style="list-style-type: none"> ● Low Probability of Intercept Penetration Aids (LPI Penaids). ● (\$7,299) Conducted LPI Penaids evaluation as an advanced technology demonstration. Improved avionics on SOF aircraft were evaluated on capability to avoid detection and improve threat awareness. ● (\$900K) Conducted Probability of Intercept and Detection Study with the Air Force Information Warfare Center to determine how many of the existing avionics systems on SOF aircraft can be detected. Results help establish baseline for Cost and Operational Effectiveness Analysis. 			
<p>FY 1996 PLAN:</p> <ul style="list-style-type: none"> ● (\$2,924K) AC-130 Low Light Level TV. Award a sole-source contract for preliminary engineering studies. ● LPI Penaids. ● (\$1,000) Complete analysis of Air Force Information Warfare Center study of how much emission detection is necessary and the cost to modify existing systems or procure new avionics. Also complete evaluation of Advanced Technology Demonstration avionics for consideration of a follow-on full development program. ● (\$2,432K) Continue flight evaluation of LPI modified avionics. ● (\$132K) Ring Laser Gyro. Conduct software/hardware integration engineering for installation on MC-130E aircraft. 			
<p>FY 1997 PLAN:</p> <ul style="list-style-type: none"> ● (\$2,232K) AC-130 Light Detection and Ranging. Conduct engineering and manufacturing development activities. 			

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE	MARCH 1996		
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.			
RDTE, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project SF100			
<ul style="list-style-type: none"> ● (\$1,475K) Aviation Engineering Analysis. Conduct a study and analysis for various preplanned product improvements to the AC-130U Gunship. Continue engineering analyses of SOF fixed wing aircraft avionics and sensors. ● (\$299K) AC-130U P3I. Conduct a study to analyze upgrade of the Gunship mission computer. 				
<p>ACQUISITION STRATEGY:</p> <ul style="list-style-type: none"> ● AC-130 Light Detection and Ranging. Compete Phase II demonstration contract and flight test proposed solution(s) then, award a competitive contract for engineering and manufacturing development (EMD). The ability to compete the EMD contract will be dependent upon data received from demonstration/validation. ● AC-130H Low Light Level TV Replacement. Pursue a phased modification of the following high failure components: AJQ-24 Pedestal, AAQ-17 Laser Illuminator, and AXQ-17 Camera. Final phase of program will turretize components. ● Low Probability of Intercept Penetration Aids. The Quiet Knight Advanced Technology Demonstration (ATD) builds upon successfully demonstrated technologies in the Balanced Technology Initiative (BTI) Quiet Knight Phase I/II flight demonstration efforts. The BTI contract was sole source. The proposed ATD acquisition strategy is to continue with the same government and contractor team and use the same contractual vehicles in order to maintain project continuity and minimize program risk. A future production program will be full and open competition. 				

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE	
APPROPRIATION / BUDGET ACTIVITY		MARCH 1996	
RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project SF100	

B. Program Change Summary	FY95	FY96	FY97	Total Cost
Previous President's Budget	14.069	7.634	10.676	Cont.
Appropriated Value	14.069	7.634		
Adjustments to Appropriated Value / President's Budget	(3.240)	(1.146)	(6.670)	
Current Budget Submit	10.829	6.488	4.006	Cont.

Change Summary Explanation:

Funding: FY 1995 decrease was a below threshold reprogramming to resource executable requirements. The FY 1996 decrease was due to revised OMB economic assumptions. The FY 1997 decrease is to meet fiscal guidance, and to meet propriety of funding requirements, and repricing of budget to reflect the Administration's revised economic assumptions forecast. \$3.963M was realigned to procurement to support AC-130 Low Light Level TV non-recurring engineering costs.

Schedule: AC-130U/H Infrared Detection Set Upgrade program slipped 15 months due to change in Air Force program management responsibilities from Warner Robins Air Logistics Center to the Aeronautical Systems Center. The LPI Penairds program is undergoing continuing studies, modeling, and advanced technology demonstration efforts to better define SOF aviation requirements for LPI technology.

Technical: None.

UNCLASSIFIED		RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE		MARCH 1996			
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE / PROJECT NO.							
RDT&E, DEFENSEWIDE / 7		PE 1160404BB Special Operations Tactical Systems Development / Project SF100							
C. Other Program Funding Summary									
	FY95	FY96	FY97	FY98	FY99	FY00	FY01		
PROC, Aircraft Spt*	4.946		2.504						
PROC, C-130 Mods**	10.850	9.341	22.096	10.820	33.462	41.918	29.905		
* Ring Laser Gyro							Cont.		
**Includes C-130 Modifications sub-line item funds for AC-130U/H Infrared Detection Set Upgrade, AC-130H Light Detection and Ranging, AC-130H Low Light Level Television replacement, and AC-130U P3I.									
	FY95				FY96		FY97		
D. Schedule Profile	1	2	3	4	1	2	3		
AC-130U/H IDS NRE Contract Award									
AC-130H LLLTV Contract Award for Studies	x								
AC-130 LIDAR MS I/II		x							

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE	MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project SF100		
A. Project Cost Breakdown (\$ in thousands)	FY95	FY96	FY97
1. AC-130H LIDAR		2,232	
2. AC-130H Low Light Level TV Replacement		2,924	
3. AC-130U/H IDS Upgrade (AN/AAQ-17)	2,530		
4. LPI Penetrators	8,199	3,432	
5. SOF Aviation Engineering Analyses	100		1,475
6. Ring Laser Gyros		132	
7. AC-130U P3I		299	
TOTAL:	10,829	6,488	4,006

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APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		DATE MARCH 1996					
R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / SF100							
B. Budget Acquisition History and Planning Information Performing Organizations		Actual or Budget Value (\$ in thousands)					
Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC				
Project Office EAC	Total Prior to FY95	Budget FY95	Budget FY97				
Total Program							
Product Development Organizations							
Tech Instruments (AN/AAQ-17)	SS/FFP TBD	Aug 95 TBD	6,824 TBD	3,995 TBD	2,530 TBD	299	
TBD Contractor (AC-130U P31)	SS/FFP TBD	Mar 96 Feb 97			6,561 2,232	3,432 2,924	2,232
TBD Contractor (LJDAQ)	SS/T&M FFP	Apr 96 Sep 96			132	2,974 132	
Lockheed Marin (LLTV)	Various					294	
Lockheed Aeronautical Svcs (RLG)							
Support and Management Organization							
Booz Allen Hamilton (LFI Penaird)	C/CPFF	Jan 95				1,444	
Test and Evaluation Organizations							
Government Furnished Property							
Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date	Total Prior to FY95	Budget FY95	Budget FY97	Budget to Complete
Subtotal Product Development				7,302	9,385	6,488	4,006
Subtotal Support and Management						1,444	1,444
Subtotal Test and Evaluation							
Total Project				7,302	10,829	6,488	4,006

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE	
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	MARCH 1996	
RDT&E, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project S0417		

COST (In Millions)	FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost
S0417, Underwater Systems Advanced Development	32.574	30.863	18.993	11.921	4.473	4.479	4.765	Cont.	Cont.

A. Mission Description and Budget Item Justification

This project funds the development of SEAL support items used during the conduct of hydrographic / inland reconnaissance, beach obstacle clearance, underwater ship attack, and other direct action missions. Sub-projects include:

- Advanced SEAL Delivery System (ASDS). The ASDS is a manned combatant submersible capable of delivering SOF personnel and weapons in a high threat environment. The ASDS will provide the requisite range, endurance, payload, and other capabilities for operation in the full range of threat environments.
- MK 8 Mod 1 SEAL Delivery Vehicle (SDV). This program upgrades and extends the service life of aging MK 8 Mod 0 SDVs; the MK 8s were built with 1960s technology. The new MK 8 Mod 1 SDV will incorporate more modern equipment to improve supportability / maintainability and will include upgrade of selected subsystems. The program was renamed MK 8 Mod 1 to more accurately reflect its nature as a Service Life Extension Program rather than a new, in-depth Research, Development, and Acquisition program.
- Undersea Systems. Development of undersea systems which provide the SOF combat swimmers with the necessary diving and diving related equipment to fulfill assigned underwater combat missions include the following:
 - Diver Active Thermal Protection System. Development of self-contained active thermal protection system which allows combat swimmers to conduct missions in extreme cold water environments. Program cancelled in FY 1995.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)			
UNCLASSIFIED	R-1 ITEM NOMENCLATURE / PROJECT NO.	DATE	MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project S0417		
<ul style="list-style-type: none"> ● Navy Special Warfare Mine Countermeasures (NSWMCM). Phased development / improvement of low magnetic and acoustic signature equipment to support the combat swimmer in the NSWMCM operational environment. ● Miniaturized Underwater Global Positioning System (GPS) Receiver (MUGR). Development of a waterproof, miniaturized, GPS unit for combat swimmers. This program transitioned from a Special Operations Special Technology effort. ● MK-24 Full Face Mask. Upgrade the current MK-24 Full Face Mask to incorporate a drinking tube to allow operators to rehydrate underway during mission. ● Non-Gasoline Burning Outboard Engine. Development of a submersible outboard engine, which does not use highly volatile gasoline, for use SOF Combat Rubber Raiding Craft. 			
<p>FY 1995 ACCOMPLISHMENTS:</p> <ul style="list-style-type: none"> ● (\$27,890K) Advanced SEAL Delivery System. Started subsystem critical design reviews and began fabrication and integration of first vehicle. Provided for design of conversion mods and model testing of primary submarine host. ● (\$2,282K) MK 8 Mod 1 SEAL Delivery Vehicle (SDV). Completed system level testing, developed training modifications, procured initial conversion kits and began conversion/overhaul of MK 8 Mod 0 SDVs. ● (\$425K) Diver Active Thermal Protection System. Program cancelled due to its inability to meet technical performance parameters. ● (\$159K) NSWMCM. Continued development of integrated sensor navigation system and remote command detonation device. 			

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE	MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S0417	
<ul style="list-style-type: none"> ● (\$20K) Miniature Underwater Global Positioning System Receiver. Completed operational testing and Milestone III. ● (\$1,798K) Project Classified. Reported under separate cover. 		
<p>FY 1996 PLAN:</p> <ul style="list-style-type: none"> ● (\$28,015K) Advanced SEAL Delivery System (ASDS). Complete subsystem critical design reviews. Continue fabrication and integration of the first ASDS and begin system level testing. Begins conversion of primary host platform to support system level testing. Begin development of special purpose equipment. ● (\$85K) Navy Special Warfare Mine Countermeasures (NSWMCM). Continue development of integrated sensor navigation system and remote command detonation device. ● (\$498K) Non-Gasoline Burning Outboard Engine. Award contract to prototype engine contract. ● (\$2,265K) Project Classified. Reported under separate cover. 		
<p>FY 1997 PLAN:</p> <ul style="list-style-type: none"> ● (\$18,221K) ASDS. Complete system level testing. Conduct in-water trials, training of Navy crews, and perform simulated missions. Provides support equipment and funds model testing for the first SSN 688 Class host. ● (\$97K) NSWMCM. Continue development of integrated sensor navigation system and remote command detonation device. ● (\$675K) Non-Gasoline Burning Engine. Continue development of prototype engine. Initiate testing of prototype engine in the 2nd quarter (January, 1997). 		

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S0417	DATE MARCH 1996
ACQUISITION STRATEGY:		

ACQUISITION STRATEGY:

- Advanced SEAL Delivery System (ASDS). To select three qualified companies to develop independent preliminary designs. Following completion of the preliminary design efforts, a request for proposal for the engineering and manufacturing development (EMD) contract was released to these companies for proposal submittal for the design, fabrication, and test of the first ASDS. A single contractor was selected based on a best value source selection process. The selected contractor will also construct the production systems as phased pricing options in the ASDS EMD contract.
- MK 8 Mod 1 SEAL Delivery Vehicle (SDV). To develop a series of hardware modifications using a combination of off-the-shelf equipment and in-house Navy and contractor developed hardware, integrated by the SDV design agent. Beginning in FY 1995, procurement funds will be used to purchase and install modifications via a combination of competitive and sole source contracts to be awarded by In-Service Engineering Agent.

B. Program Change Summary

	FY95	FY96	FY97	Total Cost
Previous President's Budget	36.497	27.587	13.098	Cont.
Appropriated Value	30.454	31.587		
Adjustments to Appropriated Value / President's Budget	2.120	(.724)	5.895	
Current Budget Submit	32.574	30.863	18.993	Cont.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	DATE
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S0417	MARCH 1996	MARCH 1996
<p>Change Summary Explanation:</p> <p>Funding: FY 1995 increase over the appropriated value is result of restructuring of programs that moved Advanced SEAL Delivery System (ASDS) primary host conversion from the Submarine Conversion program to the ASDS program. The FY 1996 current submit reflects a \$4.0M Congressional plus-up for ASDS minus a decrease due to revised OMB economic assumptions. Funds for MK-24 Full-Face Mask were realigned to Naval Special Warfare Mine Countermeasures as the Navy is now paying for development of the MK-24 upgrade. The FY 1997 increase funds ASDS model testing for the 688 Class Improved Performance Machinery Program host submarine and the increase between the government estimate and actual award amount for the ASDS fabrication and integration contract.</p> <p>Schedule: ASDS program schedule has been revised following a redesign of the pressure hull and a realignment of priorities. No impact to initial operational capability anticipated. Diver Active Thermal Protection System program terminated. Non-gasoline Burning Outboard Engine program slip is a result of late award of technology base contract.</p> <p>Technical: None.</p>			

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APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S0417							
C. Other Program Funding Summary									
ASDS	FY95	FY96	FY97	FY98	FY99	FY00	FY01		
PROC, ASDS	0			76.279	1.568	6.711	12.911		
MK 8 Mod 1 SDV	11.792	11.028	9.255	6.005	2.538	0	0		
PROC MK8 Mod 1 SDV									
NSVMCM				0	0	1.177	2.257		
PROC, Maritime Equip.									
MUGR									
PROC, Maritime Equip.	1.228								
MK 8 Mod 1 SDV									
PROC, Spares and Repair Parts									
NBOE									
PROC, Maritime Equip.									
	.238	2.265			.937	.953	Cont.		
							Cont.		

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED		DATE		MARCH 1996							
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE / PROJECT NO.											
RDT&E, DEFENSEWIDE / 7		PE 1160404BB Special Operations Tactical Systems Development / Project S0417											
D. Schedule Profile		FY95	FY96	FY97									
Advanced SEAL Delivery System		1	2	3	4	1	2	3	4				
Complete Critical Design Reviews													
Start Testing First Unit													
MK 8 Mod 1 SEAL Delivery Vehicle (SDV)													
Begin Procurement of Conversion Kits													
Commence Overhaul/Conversion													
Complete Test and Evaluation													
Diver Active Thermal Protective System													
Program Terminated													
Miniature Underwater GPS Receiver													
Milestone III													
Non-Gasoline Burning Engine													
Milestone 0/I													
NSW Mine Countermeasures													
Milestone I (FY 1998)													

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE	MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE PE 1140404BB Special Operations Tactical Systems Development / Project S0417	FY95	FY96
A. Project Cost Breakdown (\$ in thousands)			
1. Advanced SEAL Delivery System	Detailed Design / Manufacturing Development	27,290	27,315
	Program Management Office Support	600	700
2. MK 8 Mod 1 SEAL Delivery Vehicle			
	System Engineering	2,055	
	Developmental Test and Evaluation	227	
	Program Management Office Support		
3. Other Undersea Systems	Diver Active Thermal Prot Sys (DATPS) Development	370	
	DATPS Program Management Office Support	15	
	DATPS OT&E	40	
	Naval Special Warfare Mine Countermeasures		
	Engineering and Manufacturing Dev.	159	85
	Minature Underwater GPS Receiver Program	20	
	Management Office Support / Test		
	Non-Gasoline Burning Outboard Engine Development		
4. Project Classified			
	TOTAL:	32,574	30,863
			18,993

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)				DATE MARCH 1996							
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7				R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project S0417							
B. Budget Acquisition History and Planning Information											
Performing Organizations											
Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY95	Budget FY95	Budget FY96				
Product Development Organizations	C/CPIF CPFF WR Various	Sep 94 Apr 95 Various Jun-May 95			25,090	19,345 5,100 2,055 159 370	12,000 3,900 85				
ASDS, Washington, MD ASDS, Newport News Shipbuilding, VA SDV, NSWC, Dahlgren NSWMCN, TBD DATPS, Coastal Systems Station (CSS) MUGR, CSS NBQE, CSS Project Classified	Various Various Various Various Various Various Various										
Support and Management Organizations	WR Various WR Various WR WR WR WR	Various Various Various Various Various Various Various Various			510 1,347 147 72 223 125	600 2,861 227 15	700 4,070				
ASDS, NAVSEASYSCOM (PMO) ASDS, NAVSEASYSCOM SDV, NAVSEASYSCOM DATPS, NAVSEASYSCOM NSWMCN, NAVSEASYSCOM MUGR, CSS NBQE, CSS	Various Various WR WR WR WR										
Test and Evaluation Organizations					400 106	40 20	398				
Government Furnished Property - None							276				
Subtotal Product Development				37,291	28,811	25,595	12,396				
Subtotal Support and Mgmt				2,424	3,703	4,870	6,321				
Subtotal Test and Evaluation				506	60	398	276				
Total Project				40,221	32,574	30,863	18,993				

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	
APPROPRIATION / BUDGET ACTIVITY		DATE	
RDT&E, DEFENSEWIDE / 7		MARCH 1996	
R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S1684			

COST (In Millions)	FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost
S1684, SOF Surface Craft Advanced Development	3.520	9.189	2.960	3.541	2.488	5.948	.678	Cont.	Cont.

A. Mission Description and Budget Item Justification

This project provides for development and testing of surface combatant craft and selected items of specialized equipment to meet the unique requirements of Special Operations Forces (SOF). These craft and equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. Sub-projects include:

- MK V Special Operations Craft (MK V SOC). The MK V SOC provides a fast, rapidly deployable, air-transportable, and reliable combatant craft to be used primarily for medium range SEAL insertion/extraction tasks and limited coastal patrol and interdiction missions.
- Navy Boat Program. This program provides engineering studies, tests, preliminary design, and specification development for combatant craft and craft subsystems. This will result in improved operability and safety, reduced detectability, and increased survivability for inflatable boats, rigid inflatable boats, and other Naval Special Warfare (NSW) combatant surface craft.
- NSW Rigid Inflatable Boat (RIB). Program acquires a fully operational quantity of 70 RIBs for SEAL support. The RIB has a projected 5 year service life. Acquisition strategy is to competitively procure commercially available boats and modify them to meet revised Operational Requirement Document requirements. Missions for the RIB include tactical support of SOF (including ship-to-shore insertion/extraction of SEALs and Army SOF), resupply along littorals and nighttime offshore surveillance.
- Patrol Coastal (PC) Upgrades. This sub-project supports the development, test, and evaluation of PC upgrades/modifications

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	MARCH 1996
RDT&E, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project S1684	

that will result in improved self-defense and SOF support. A self-defense system upgrade will be developed and tested in FY 1996-1999 for production and installation in FY 2001-2005.

FY 1995 ACCOMPLISHMENTS:

- (\$1,474K) MK V Special Operations Craft (MK V SOC). Awarded production contract and conducted technical evaluations of first two low rate initial production craft. Initiated pre-planned product improvement efforts to integrate government furnished weapons, began to identify Non-Developmental Item (NDI) electronics upgrade candidates, and planned proof-of-concept tests for NDI Forward Looking Infrared (FLIR) equipments.
 - (\$879K) Naval Special Warfare (NSW) Rigid Inflatable Boat (RIB). Provided notification to Congress of new NSW RIB program and requested FY 1996 funding adjustments to support new acquisition strategy. Developed performance specification for prototype NSW RIB.
 - (\$1,167K) Patrol Coastal (PC) Upgrades. Continued propeller redesign effort and prototype testing and procured, installed, and tested active noise cancellation system. Continued P3I effort to include version 2 software development for command and control. Conducted PRIVATEER Development Test / Operational Test.
- FY 1996 PLAN:
- (\$3,869K) MK V SOC. Conduct operational evaluation, achieve Milestone III, and continue program. Finalize weapons integration efforts, conduct detailed analysis/component testing of NDI electronics upgrade and FLIR candidates. Conduct field operational testing and evaluation of upgraded weapons suite.
 - (\$49K) Navy Boat Program. Conduct troubleshooting and development to correct emergent safety and reliability problems on NSW surface craft.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	UNCLASSIFIED
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S1684	DATE	DATE
<ul style="list-style-type: none"> ● (\$4,217K) Naval Special Warfare (NSW) Rigid Inflatable Boat (RIB). Continue specification development, conduct site surveys, source selection support, detailed test planning, prototype acquisition, signature reduction, and transportability studies. ● (\$1,054K) Patrol Coastal (PC) Upgrades. Conduct studies for self-defense systems upgrade. 			
<p>FY 1997 PLAN:</p> <ul style="list-style-type: none"> ● (\$965K) MK V Special Operations Craft (MKV SOC). Complete field operational testing and evaluation of selected Non-Developmental Item (NDI) electronics upgrades and Forward Looking Infrared equipment. ● (\$50K) Navy Boat Program. Continue troubleshooting and development to correct emergent safety and reliability problems on NSW surface craft. ● (\$210K) NSW RIB. Continue signature reduction studies. ● (\$1,735K) PC Upgrades. Award a contract for long lead items for ship self-defense system engineering development model and develop installation drawings. Conduct PC modular afterdeck study and prepare preliminary drawings. 			
<p>ACQUISITION STRATEGY:</p> <ul style="list-style-type: none"> ● MK V SOC. Program is in Phase III of the DoD acquisition process. Development testing and evaluations and early operational assessment have been completed. Milestone II was reached on June 21, 1994. Production contract was awarded in November 1994. The initial four craft are approved as low rate initial production. Remaining production systems will be procured via options to this contract subsequent to Milestone III. P3I efforts, oriented to NDI improvements to baseline 			

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED																											
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	DATE	MARCH 1996																										
RDTE, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project S1684																												
<p>capabilities, commenced in 1QTR95. Technical evaluation / operational evaluation occurred during 4QTR95/1QTR96, followed by a Milestone III decision, October 27, 1995.</p> <ul style="list-style-type: none"> • Naval Special Warfare Rigid Inflatable Boat. Following complete program restructure, a performance specification driven request for proposal was issued to industry in October 1995. Design proposals were received in January 1996, and are being evaluated from January to April 1996. Based upon these evaluations, at least two test article contracts will be awarded. Developmental and operational testing will be conducted on these test articles to reach a downselect decision to one contractor in 2QTR97. • Patrol Coastal Self-Defense Systems Upgrade. Systems will be added to this ship class through integration, test, and evaluation of NDI systems to the maximum extent practical. A market survey indicated there are several potential NDI solutions. A Milestone 0 will be sought 3QTR96. An Engineering Development Model will be procured for PC-specific developmental and operational tests. The NDI strategy will maximize use of data already obtained via other Service testing. 																													
<p>B. Program Change Summary</p> <table> <thead> <tr> <th></th> <th>FY95</th> <th>FY96</th> <th>FY97</th> <th>Total Cost</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget</td> <td>.043</td> <td>5.797</td> <td>3.054</td> <td>Cont.</td> </tr> <tr> <td>Appropriated Value</td> <td>.083</td> <td>10.090</td> <td></td> <td></td> </tr> <tr> <td>Adjustments to Appropriated Value / President's Budget</td> <td>3.437</td> <td>(.901)</td> <td>(.094)</td> <td></td> </tr> <tr> <td>Current Budget Submit</td> <td>3.520</td> <td>9.189</td> <td>2.960</td> <td>Cont.</td> </tr> </tbody> </table>						FY95	FY96	FY97	Total Cost	Previous President's Budget	.043	5.797	3.054	Cont.	Appropriated Value	.083	10.090			Adjustments to Appropriated Value / President's Budget	3.437	(.901)	(.094)		Current Budget Submit	3.520	9.189	2.960	Cont.
	FY95	FY96	FY97	Total Cost																									
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Current Budget Submit	3.520	9.189	2.960	Cont.																									

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	DATE
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	MARCH 1996	
RDT&E, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project S1684		
<p>Change Summary Explanation:</p> <p>Funding: FY 1995 increase continued the MK V Special Operations Craft, Navy Boat Program, and Patrol Coastal efforts described under FY 1995 Accomplishments. FY 1996 increase reflects Congressional realignment from SOF Maritime Equipment procurement to Naval Special Warfare Rigid Inflatable Boat program less decrease due to revised economic assumptions that support the Bosnia reprogramming.</p> <p>Schedule: None.</p> <p>Technical: None.</p>			

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED		DATE		MARCH 1996			
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S1684							
C. Other Program Funding Summary									
		FY95	FY96	FY97	FY98	FY99	FY00		
RIBS PROC, Maritime Equip.	.092	5.784	3.945	7.441	9.328	9.036	8.506		
Patrol Coastal PROC, Patrol Coastal	33.954	19.520					171.829		
MK V SOC PROC, MK V	14.522	35.884	41.211	35.384			145.142		
PROC, Maritime Equipment Modifica- tions	8.492	4.833	6.136	48.051	34.515	49.272	Cont.		
PROC, SOF Spares and Repair Parts	6.858	14.113	11.710	1.224			36.565		

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED		DATE		MARCH 1996					
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S1684									
D. Schedule Profile		FY95	1	2	3	4	1	2	3	4	FY97
Navy Boat Program											
Commence studies											X
NSW Rigid Inflatable Boat											
Dev Performance Spec											X
MS II											X
DT/OT											X
Patrol Coastal Upgrades											
Complete MK 96 Gun Sys Assembly/Test											X
SRB approval for MK 96 Install											X
MS 0 for Self-Defense System Upgrade											X
Complete Self-Defense System COEA											X
Self-Defense System Milestone I/II											
MK V Special Operations Craft											
Production Contract Award											X
Commence P3I efforts											X
TECHEVAL/OPEVAL											X
Milestone III											X

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE MARCH 1996	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations	FY95	FY96
A. Project Cost Breakdown (\$ in thousands)			
1. Navy Boat Program		49	49
2. Patrol Coastal Upgrades			50
Primary Hardware Development		454	1,057
DT&E		172	194
Government Engineering Support		424	479
Travel		5	4
Software Development		40	
3. MK V Special Operations Craft			
Primary Hardware Development		200	50
DT&E		400	50
OT&E		175	1,254
Contractor Engineering Support		124	2,015
Government Engineering Support		350	500
Program Management Support		75	300
Travel		50	200
Miscellaneous (<15% of total)		150	45
4. NSW Rigid Inflatable Boat			
Primary Hardware development		2,567	
DT&E		115	
Engineering Support		879	1,535
TOTAL:		3,520	9,189
			2,960

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)				DATE MARCH 1996									
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project S1684											
B. Budget Acquisition History and Planning Information													
Performing Organizations													
Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY95	Budget FY95	Budget to Complete						
Product Development Organizations													
Peterson Builders	C/CFFF	Dec 93	4,955	4,955	4,955	4,955	4,955						
Halter Marine	C/CFFF	Apr 94	9,500	9,500	9,500	9,500	9,500						
Miscellaneous Government Contractor	MIPR	Oct 94-Sep 97	5,129	5,129	2,982	2,982	Cont.						
Miscellaneous Government	C/OPTION	Nov 93	169	169	169	169	214						
Naval Special Warfare Center	WR	Sep 93	220	220	220	220	220						
Miscellaneous Government	WR	Aug 94	3,275	3,275	3,275	3,275	3,275						
TBD Contractor	WR	Jan 94-Mar 95	1,445	1,445	1,445	1,445	1,445						
Miscellaneous Government	C/OPTION	Jan 96-Feb 96	3,951	3,951	3,951	3,951	3,951						
TBD Contractor	MIPR	Jan 97	433	433	433	433	433						
	C/CFFF	May 96				2,568	2,568						
Support and Management Organizations													
Miscellaneous Government	MIPR/WR	Oct 93-Dec 94	7,787	7,787	5,590	499	1,453						
Miscellaneous Contractors	PO	Oct 93-Sep 97	3,027	3,027	1,863	175	869						
Miscellaneous Contractor	C/FP	Mar 94	110	110	110	110	110						
Miscellaneous Government	WR	Jan 94-Oct 94	393	393	393	393	393						
Miscellaneous Contractor	C/OPTION	Jul 95-Sep 95				700	1,012						
Miscellaneous Government	MIPR	Sep 95-Sep 97				179	523						
Miscellaneous Government	MIPR	Dec 96-Sep 96				428	484						
							Cont.						
Test and Evaluation Organizations													
Miscellaneous Government	MIPR/PO	Oct 93-Sep 97	1,448	1,448	648	600	100						
Miscellaneous Government	WR	Mar 94-Mar 95	655	655	655	67	100						
Miscellaneous Contractor	MIPR	Sep 96-Sep 97	277	277	277	67	210						
Miscellaneous Government	MIPR/WR	Oct 94-Oct 95				315	315						
Miscellaneous Government	MIPR	Oct 94-Oct 95				374	740						
Miscellaneous Contractor	C/OPTION	Mar 96-Sep 96	47	47	47	49	50						
						47	47						

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE MARCH 1996				
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Advanced Development / Project S1684				
B. Budget Acquisition History and Planning Information Performing Organizations		Actual or Budget Value (\$ in thousands)				
Government Furnished Property						
Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date			
Total Prior to FY95		Budget FY95	Budget FY96			
		Budget FY97	Budget to Complete			
			Total Program			
Subtotal Product Development	22,546	678	4,469	1,557	Cont.	Cont.
Subtotal Support and Management	7,956		1,553	4,285	849	Cont.
Subtotal Test and Evaluation	1,303		1,289	435	554	Cont.
Total Project	31,805		9,119	2,960	Cont.	Cont.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	
APPROPRIATION / BUDGET ACTIVITY		DATE	
RDT&E, DEFENSEWIDE / 7		MARCH 1996	
R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project 3284			

COST (In Millions)	FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost Cont.
3284, SOF Aircraft Defensive Systems	29.339	12.109	6.567	7.879	3.990	13.274	11.048	Cont.	Cont.

A. Mission Description and Budget Item Justification

Project provides definition, development, prototyping and testing of aircraft defensive avionics systems. The project will identify hardware and software enhancements for each Special Operations Forces (SOF) aircraft that will reduce detection, vulnerability, and threat engagement from threat radars thereby increasing the overall survivability of SOF assets. This project will identify and develop enhancements to each platform to meet the projected threat. Recommendations for equipment modification or replacement will be developed by each System Program Manager based upon the results of on-going engineering assessments and user operational requirements. This project is funding: dispenser upgrade and improvement programs, threat and missile warning receiver enhancements, radio frequency (RF) jammer improvements, and development of an infrared jamming system. Project also provides systems for SOF-unique portions of the Warner Robins-Air Logistics Center Electronic Warfare Avionics Integrated Systems Facility (EWASIF). The EWASIF directly supports software development and testing. The EWASIF effort is a type of Systems Integration Laboratory designed to support the incorporation of SOF aircraft defensive systems modifications into specific SOF platforms. Sub-projects include:

- ALE-40 Chaff and Flare Dispenser. A modification of the ALE-40 chaff and flare dispenser system to the ALE-47 configuration that will enhance the aircraft's self protection capability against infrared threats by providing timing and programming capability.
- AAR-44 Missile Warning Receiver. A systems improvement modification to the AAR-44 Passive Infrared Warning Receiver to enhance operational capability and reliability against surface-to-air missiles. Program corrects critical high false alarm rate and provides Directional Infrared Countermeasures interface.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	DATE
RDT&E, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project 3284	MARCH 1996

- Directional Infrared Countermeasures (DIRCM). A joint international cooperative United Kingdom/United States project to develop a jammer for MC-130E/H and AC-130H/U aircraft capable of countering missile threats in the band one, two and four infrared frequency spectrum.
- ALQ-172 Electronic Countermeasures. A modification of the ALQ-172 radio frequency jammer that improves capability and frequency coverage for eight AC-130H gunships.

FY 1995 ACCOMPLISHMENTS:

- (\$647K) ALE-47 Chaff and Flare Dispenser. Completed ALE-47 hot mock-up.
- (\$3,100K) AAR-44 Missile Warning Receiver. Awarded an engineering and manufacturing development contract for the AAR-44 Missile Launch Warning System.
- (\$500K) Electronic Warfare Avionics Integrated Systems Facility (EWAISF). Updated the AAR-44 Integrated Support Station in support the EWAISF efforts.
- (\$22,627) DIRCM. Completed source selection and awarded development contract. Completed manufacture of test article and began qualification testing of prime mission equipment hardware. Completed system design, preliminary design review for Group B. Completed design verification testing.
- (\$2,465K) ALQ-172 Countermeasures. Continued to test and support the ALQ-172 RF Countermeasures Low-Band Jammer for eight AC-130H aircraft.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	DATE	MARCH 1996
RD&E, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project 3284		
FY 1996 PLAN:			
<ul style="list-style-type: none"> ● (\$8,968K) Directional Infrared Countermeasures (DIRCM). Continue the cooperative UK/US development/production program. Complete Group A preliminary design review. Complete Group A and B critical design review. Complete qualification testing of prime mission equipment hardware. ● (\$1,238K) ALQ-172 Electronic Countermeasures. Continue to test and support the ALQ-172 Radio Frequency Countermeasures Low-Band Jammer for eight AC-130H aircraft. ● (\$1,903K) Electronic Warfare Avionics Integrated Systems Facility (EWAISF). Update the ALQ-196 Integrated Support Station (ISS) in support of EWAISF laboratory efforts. 			
FY 1997 PLAN:			
<ul style="list-style-type: none"> ● (\$3,738K) DIRCM. Continue to support a cooperative UK/US development/production program for 59 SOF C-130 aircraft. ● (\$2,829K) EWAISF. Continue to support laboratory efforts to include update of scenario model and ALQ-162 ISS update. 			
ACQUISITION STRATEGY:			
<ul style="list-style-type: none"> ● AAR-44 Missile Warning Receiver. Award a sole source cost plus incentive fee Engineering and Manufacturing Development (EMD) contract followed by a firm fixed price production contract to remove, modify and replace the AAR-44 in all SOF aircraft. ● DIRCM. The Memorandum of Agreement between the UK/US established the cooperative international DIRCM program. The UK Ministry of Defence is the lead for the program. UK law applies to all acquisition actions. USSOCOM program 			

UNCLASSIFIED		RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)																										
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project 3284	DATE	MARCH 1996																									
<p>manager is the US deputy to the UK Directional Infrared Countermeasures program manager.</p> <ul style="list-style-type: none"> • ALQ-172 Electronic Countermeasures. Issue a sole source fixed price contract to International Telephone and Telegraph for development of low band jammer and the Group B production. Issue a competitive firm fixed price contract for the Group A. • Electronic Warfare Avionics Integrated Systems Facility (EWAISF). Award sole source contracts to the manufacturer of the prime mission equipment required for hardware and hardware/software integration into the EWAISF. 																												
<p>B. Program Change Summary</p> <table> <thead> <tr> <th></th> <th>FY95</th> <th>FY96</th> <th>FY97</th> <th>Total Cost</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget</td> <td>30.359</td> <td>12.361</td> <td>6.778</td> <td>Cont.</td> </tr> <tr> <td>Appropriated Value</td> <td>31.035</td> <td>12.361</td> <td></td> <td></td> </tr> <tr> <td>Adjustments to Appropriated Value / President's Budget</td> <td>(1.696)</td> <td>(0.252)</td> <td>(.211)</td> <td></td> </tr> <tr> <td>Current Budget Submit</td> <td>29.339</td> <td>12.109</td> <td>6.567</td> <td>Cont.</td> </tr> </tbody> </table> <p>Change Summary Explanation:</p>					FY95	FY96	FY97	Total Cost	Previous President's Budget	30.359	12.361	6.778	Cont.	Appropriated Value	31.035	12.361			Adjustments to Appropriated Value / President's Budget	(1.696)	(0.252)	(.211)		Current Budget Submit	29.339	12.109	6.567	Cont.
	FY95	FY96	FY97	Total Cost																								
Previous President's Budget	30.359	12.361	6.778	Cont.																								
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Adjustments to Appropriated Value / President's Budget	(1.696)	(0.252)	(.211)																									
Current Budget Submit	29.339	12.109	6.567	Cont.																								
<p>Funding: FY 1995 decrease is for Congressional reduction in consulting services and for directed investment in the Small Business Innovative Research Program. FY 1996 decrease due to revised OMB economic assumptions. FY 1997 decrease due to repricing of budgets to reflect the Administration's revised economic assumptions forecast.</p> <p>Schedule: Directional Infrared Countermeasures program engineering and manufacturing development phase has been extended from 18-22 months to accomplish all required testing. Initial Operational Capability for AC-130H slipped accordingly.</p>																												

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED		DATE		MARCH 1996			
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE / PROJECT NO.							
RDT&E, DEFENSEWIDE / 7 PE 1160404BB Special Operations Tactical Systems Development / Project 3284									
Technical:	None.								
C. Other Program Funding Summary		FY95	FY96	FY97	FY98	FY99	FY00		
PROC, C-130 Mods*	28.789	52.096	37.035	68.524	90.511	34.664	21.963		
*Includes C-130 Modifications sub-line item funds for ALE-47 Chaff and Flare Dispenser, DIRCM, APR-46 Improvements, ALQ-172 Radio Frequency Countermeasures Jammer, Lifeline, and AAR-44 Missile Warning Receiver.									
D. Schedule Profile		FY95				FY96	FY97		
Directional Infrared Countermeasures (DIRCM)	1	2	3	4	1	2	3		
Award EMD Contract									
CDR	x								
Start Formal Testing									
Production Decision									
Complete AC-130H QOT&E									
ALQ-172 Elec Countermeasures MS III									
AAR-44 Missile Warning Receiver MS III		x				x			

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE MARCH 1996	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project 3284	
A. Project Cost Breakdown (\$ in thousands)		FY95	FY96
1. AAR-44		3,100	
2. ALB-47		647	
3. ALQ-172		2,465	1,238
4. DIRCM			
Interface Control Document Development			
Preliminary / Functional Design			
Tests	1,123	2,698	2,000
ECPs		231	377
Program Management Office	2,214	2,416	1,361
5. EWAISF	500	1,903	2,829
TOTAL:	29,339	12,109	6,557

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R&T&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)

APPROPRIATION / BUDGET ACTIVITY
RDT&E, DEFENSEWIDE / 7

R-1 ITEM NOMENCLATURE
PE 1160404BB Special Operations Tactical Systems Development / Project 3284

B.B. Budget Acquisition History and Planning Information Performing Organizations

Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY95	Budget FY95	Budget FY96	Budget FY97	Budget to Complete	Total Program
Product Development Organizations										
Northrop (DIRCM)	C/FP	Mar 95	TBD	33,715	9,634	20,413	3,668			33,715
Georgia Tech (FWAISF)	SS/CPFF	Sep 94	4,393	4,393	1990	500	1,903	2,829	Cont.	4,393
Amburst (FWAISF)	SS/FPF	Jun 96								Cont.
Cincinnati Electronics (AAR-44)	SS/CPFF	Nov 94	6,733	6,733	3,633	3,100				6,733
Various	Various			2,476	838	838	124	1,238	Cont.	Cont.
Support and Management Organizations										
Booz Allen Hamilton (DIRCM)	C/FP	Apr 93	TBD	11,944	3,628	2,214	2,602	1,500	2,000	11,944
SSAI (ALQ-172)	SS/CPFF	Jun 95	2,848	2,848	1,348	1,000	500			2,848
MTI (ALQ-172)	SS/FPF	Jul 95	382	382	124	129	129			382
ITC (ALQ-172)	SS/T&M	Sep 95	308	308	115	93	100			308
Test and Evaluation Organizations										
APOTEC/Other (DIRCM)	PO	Dec 95	TBD	4,698				2,698	1,000	4,698
USAF Flight Test Facility (ALQ-172)	PO	Nov 95	3,885	3,885	2,448		1,052	385	1,000	3,885

Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date	Total Prior to FY95	Budget FY95	Budget FY96	Budget FY97	Budget to Complete	Total Program
ALQ-172 Group B provided by USAF									
Subtotal Product Development				17,733		24,851	5,695	4,067	Cont.
Subtotal Support and Management					5,215	3,436	3,331	1,500	2,000
Subtotal Test and Evaluation					2,448		1,052	3,083	1,000
Total Project					25,306	29,339	12,109	6,567	Cont.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE	MARCH 1996	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project 3326	
COST (In Millions)	FY95	FY96	FY97
3326, AC-130U	2.186	6.124	14.563
	FY98	FY99	FY00
	6.327	1.668	1.395
	FY01	Cost to Complete	Total Cost
	1.384	6.699	353.934

A. Mission Description and Budget Item Justification

The AC-130U aircraft will be more capable and survivable than the existing AC-130A/H aircraft. The aircraft subsystems will include precision navigation, target acquisition and strike radar, fire control computers integrated on redundant MIL-STD-1553B data buses, electronic countermeasures, infrared countermeasures, aerial refueling, covert lighting, trainable weapons, all light level television, infrared sensor, and secure communications systems. These subsystems will enable the gunship to strike targets with surgical accuracy, to loiter safely in the target area for extended time periods, and to perform these tasks in night or adverse weather conditions. Every effort has been made to adapt off-the-shelf equipment. To the maximum extent possible, the subsystems in the AC-130U will be common with systems on other Air Force Special Operations Command aircraft. AC-130U software will be fixed and/or enhanced using a Software Integration Laboratory (SIL).

FY 1995 ACCOMPLISHMENTS:

- (\$108K) Continued SIL software rehost.
- (\$230K) Continued effort on technical order verification and validation.
- (\$1,234K) Performed technical studies and analyses.
- (\$614K) Supported Program Management Office operations

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project 3326	DATE MARCH 1996

FY 1996 PLAN:

- (\$2,352K) Continue development of Software Integration Laboratory (SIL).
- (\$1,372K) Continue technical studies and analysis.
- (\$2,153K) Analysis and identification of corrections to service reports.
- (\$247K) Continue effort on technical order verification and validation.

FY 1997 PLAN:

- (\$9,700K) Develop SIL enhanced infrared support capability and mission computer upgrade.
- (\$3,300K) Develop depot-level fixtures and holding tools for delivery to Warner Robins Air Logistics Center.
- (\$1,307K) Continue technical studies and analysis.
- (\$256K) Continue effort on technical order verification and validation.

ACQUISITION STRATEGY: Modify C-130H airframe into a side-firing configuration on a sole-source fixed price incentive development contract. Conduct a combined Qualification Test and Evaluation/Operational Test and Evaluation(QOT&E) and a dedicated QOT&E. The AC-130U will be logistically supported at the intermediate, organizational and depot level via interim contractor support until

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE	MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project 3326	
organic support is established. Required assets available September 1995 with initial operational capability March 1996.			
B. Program Change Summary	FY95	FY96	FY97
Previous President's Budget	2.186	6.252	15.031
Appropriated Value	2.700	6.252	
Adjustments to Appropriated Value / President's Budget	(.514)	(.128)	(.468)
Current Budget Submit	2.186	6.124	14.563
Change Summary Explanation:			
Funding:	FY 1995 decrease is for Congressional reduction of Defensewide RDT&E for travel, civilian pay and a directed Department of Energy reprogramming. FY 1995 was further decreased for Congressional reduction in consulting services. FY 1996 decrease due to revised OMB economic assumptions. FY 1997 decrease due to repricing of budgets to reflect the Administration's revised economic forecast.		
Schedule:	None.		
Technical:	None.		

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		MARCH 1996	
R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project 3326			
C. Other Program Funding Summary	FY95	FY96	FY97
PROC, AC-130U	71.199	62.216	44.800
	FY98	FY99	FY00
	FY01	To Complete	Total Cost
	FY95	FY96	FY97
	1	2	3
	x	x	x
	4	1	2
	3	4	1
	2	3	2
	1	2	3
	4	1	2
	3	4	1
	2	3	2
	1	2	3
	4	1	2

D. Schedule Profile

- Finish OT&E/QOT&E; Start Dedicated QOT&E
- Required Assets Available
- Initial Operational Capability
- Begin SII infrared enhancement & mission computer upgrade
- Full Operational Capability: Mar 2001

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE MARCH 1996	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project 3326	
Project Cost Breakdown (\$ in thousands)		FY95	FY96
1. Other Gov't Test (TOV&V)		230	247
2. SII S/W		108	2,352
3. Depot-level fixtures and holding tools			3,300
4. Technical Studies / Analyses		1234	1,372
5. Travel		50	1,307
6. Development of Service Reports			2,153
7. Miscellaneous (known requirements i.e. Safety Board, Program Office Support, etc),		564	
TOTAL:		2,186	6,124
			14,563

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)				DATE MARCH 1996							
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7				R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project 3326							
B. Budget Acquisition History and Planning Information											
Performing Organizations											
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY95	Budget FY95	Budget FY96				
Product Development Organizations											
Rockwell NAA	C/PPTF	Jul 87	194,589	194,589	16,941	16,941	194,589				
Rockwell Fit Test	SS/PFPF				40,289	14,158	16,941				
Rockwell ECPs	SS/CPPF				4,777	4,777	40,289				
Loral (IBM)	SS/PPTF				1,436	1,436	4,777				
General Electric	SS/FPP				135	135	1,436				
TED (ECOs)	TBD				955	955	135				
LASC	SS/FPP				616	616	955				
Rockwell (T-1 Training)	SS/FPP				3,798	3,798	616				
Miscellaneous	Various						3,798				
Support and Management Organizations											
Air Force, AFMC AS/CIU	Various				32,188	19,079	1,372				
Test and Evaluation Organizations					1,848		1,307				
AFFTC	PO				33,968						
ITI	SS/FPP				835						
Other Gov't Test (TOVV)	PO	Oct/as. FY			1,696						
RADC Testing	PO				748						
WRDC Testing	PO				224						

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RD&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (B-3)

R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project 3326

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project 3642

COST (In Millions)	FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost
3642, Aircrew Training System	40.624	18.034	4.339	.243	.238	0	0	0	208.283

A. Mission Description and Budget Item Justification

This project is developing an integrated, state-of-the-art Special Operations Forces (SOF) aircraft, ground-based Aircrew Training System (ATS) to support initial aircraft, mission, and special qualification, continuation training, upgrade training, and combat mission rehearsal requirements for MC-130E and MC-130H aircrews. The ATS requirement was driven by the lack of formal schools for the Combat Talon crew members and the absence of multi-aircraft, integrated, real-time combat mission rehearsal capability for MC-130E/H aircrews. Existing training rehearsal restrictions caused by airspace/weather, critical mission safety, and security consideration require a capability to rehearse extremely sensitive missions of the highest national priority in other than actual aircraft. Increasing operational tasking, joint maneuver training, and the extensive crew member training workload for initial, continuation, mission, special mission and upgrade training have all contributed to the need for this comprehensive training capability. Decreasing crew member experience levels in all crew positions exacerbates the need for this capability. SOF ATS provides training and fixed site aircrew integrated mission rehearsal capability in a contractor operated and maintained system. This system is composed of two weapon system trainers, a mission rehearsal device (MC-130E mission rehearsal device effort is terminated in FY 1996), part task trainers, maintenance trainers, and computer based training equipment, logistics support packages, courseware, and contractor provided instruction for all crew members of each aircraft. The system will provide a mix of academics, simulator training, and aircraft flight training to produce combat qualified crew members. This system will also provide combat mission rehearsal capability allowing MC-130E/H aircrews to rehearse highly classified, real-world missions of the highest national priority within 48 hours of tasking by National Command Authority.

FY 1995 ACCOMPLISHMENTS:

- (\$290K) Completed Combat Talon II full course small group tryouts.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project 3642
<p>• (\$5,500K) Continued Combat Talon I Weapon System Trainer (WST) and Mission Rehearsal Device (MRD) development.</p> <p>• (\$31,500K) Continued Combat Talon II WST and MRD development.</p> <p>• (\$1,000K) Began development of Training System Support Center.</p> <p>• (\$2,034K) Supported Program Management Office.</p> <p>• (\$300K) Delivered Database Generation System.</p>	
<p>FY 1996 PLAN:</p> <p>• (\$11,000K) Continue Combat Talon II MRD development and complete WST acceptance.</p> <p>• (\$5,000K) Continue Talon I WST development.</p> <p>• (\$1,000K) Continue Training System Support Center development.</p> <p>• (\$1,034K) Support Program Management Office.</p>	
<p>FY 1997 PLAN:</p> <p>• (\$1,000K) Complete Combat Talon I WST.</p> <p>• (\$850K) Complete Combat Talon II MRD development and acceptance.</p>	

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE																										
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		MARCH 1996																										
R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project 3642																												
<ul style="list-style-type: none"> ● (\$489K) Support Program Management Office. ● (\$2,000K) Complete Training System Support Center. 																												
ACQUISITION STRATEGY:																												
<p>Awarded competitive contract to develop an integrated ground-based Aircrew Training System (ATS) composed of weapon system trainers (WST), mission rehearsal devices (MRD), part task trainers, and computer-based training. ATS will be contractor operated and maintained.</p>																												
B. Program Change Summary <table> <thead> <tr> <th></th> <th>FY95</th> <th>FY96</th> <th>FY97</th> <th>Total Cost</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget</td> <td>38.441</td> <td>18.410</td> <td>4.478</td> <td>208.815</td> </tr> <tr> <td>Appropriated Value</td> <td>38.615</td> <td>18.410</td> <td></td> <td></td> </tr> <tr> <td>Adjustments to Appropriated Value /President's Budget</td> <td>2.009</td> <td>(.376)</td> <td>(.139)</td> <td></td> </tr> <tr> <td>Current Budget Submit</td> <td>40.624</td> <td>18.034</td> <td>4.339</td> <td>208.283</td> </tr> </tbody> </table>			FY95	FY96	FY97	Total Cost	Previous President's Budget	38.441	18.410	4.478	208.815	Appropriated Value	38.615	18.410			Adjustments to Appropriated Value /President's Budget	2.009	(.376)	(.139)		Current Budget Submit	40.624	18.034	4.339	208.283		
	FY95	FY96	FY97	Total Cost																								
Previous President's Budget	38.441	18.410	4.478	208.815																								
Appropriated Value	38.615	18.410																										
Adjustments to Appropriated Value /President's Budget	2.009	(.376)	(.139)																									
Current Budget Submit	40.624	18.034	4.339	208.283																								
Change Summary Explanation:																												
<p>Funding: FY 1995 adjustment is for Congressional reduction in consulting services and valid cost overruns on the development contract. FY 1996 decrease for Congressional inflation adjustments and overhead/management savings. FY 1997 decrease due to repricing of budgets to reflect the Administration's revised economic assumptions forecast.</p>																												
<p>Schedule: Schedule has been adjusted to advance the Talon I WST. Delivery of the Talon II WST slipped two quarters. The</p>																												

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RDTE & PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE MARCH 1996	
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project 3642	
		FY95	FY96
A. Project Cost Breakdown (\$ in thousands)			
Combat Talon I		5,000	4,400
Weapon System Trainer (WST)		500	600
Mission Rehearsal Device (MRD)			
Combat Talon II		290	600
Curriculum		20,000	2,400
WST		11,500	8,000
MRD		1,000	850
Training Systems Support Center		300	1,000
Database Generation System			2,000
Other			
Mission Support		2,034	1,034
			489
TOTAL:		40,624	18,034
Page 1 of 2 Pages			4,339

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)				DATE MARCH 1996			
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7				R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project 3642			
B. Budget Acquisition History and Planning Information				Actual or Budget Value (\$ in thousands)			
Performing Organizations							
Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY95	Budget FY95	Budget to Complete
Product Development Organizations Loral	C/CPAF/JF	Jun 89		197,568	137,923	38,590	205
Support and Management Organizations Air Force AFMC ASC				10,715	6,882	2,034	1,034
Test and Evaluation Organizations						489	276
Government Furnished Property							
Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date	Total Prior to FY95	Budget FY95	Budget FY96	Budget to Complete
Product Development Talon I GFE (no cost to project) Talon II GFE (no cost to project) Misc GFE (no cost to project)			1988-93 1988-93 1988-93				
Subtotal Product Development				137,923	38,590	11,000	3,850
Subtotal Support and Management				6,882	2,034	1,034	489
Subtotal Test and Evaluation							
Total Project				144,805	40,624	18,034	4,339
							481
							208,283

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APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S350					
COST (In Millions)		FY95	FY96	FY97	FY98	FY99	FY00
S350, Special Operations Forces Planning and Rehearsal System (SOFPARS)	2.557	9.456	7.439	5.656	4.092	3.824	3.559
						Cost to Complete	Total Cost
						Cont.	Cont.

A. Mission Description and Budget Item Justification

SOFPARS is a joint acquisition program for the United States Special Operations Command. This program is developing an automated mission planning capability to support Special Operations Forces (SOF). SOFPARS will consist of the SOF version of the Air Force Mission Support System and the SOF Portable Computer Flight Planning System. SOFPARS will be provided to Air Force Special Operations Command units and the aviation component of the United States Army Special Operations Command - the 160th Special Operations Aviation Regiment. SOFPARS will automate mission planning thus allowing SOF commanders and crews to plan and respond quickly to missions of national importance as well as day-to-day taskings. To accomplish this task, SOFPARS will provide a multi-command level planning capability at major SOF headquarters, theater headquarters, SOF Forward Operating Bases and Forward Operating Locations. SOFPARS will also provide portable subsystems and mission execution support products for use by crews deployed to operational locations. Present aviation mission planning capabilities cannot adequately support the stated mission need. Existing systems are insufficient for planning SOF operations. Specifically, existing systems lack sufficient processing speed and flexibility, storage capacity, growth potential, graphics (both on-screen and hard copy output), image processing and storage, and the ability to process combat planning folder data in a timely manner. They also lack near-real-time access to national/tactical level data bases and the capability to update data in a timely fashion, along with the means to effectively process the data during mission planning. The mobility, complexity, quantity, and lethality of enemy threats dictate automated data input and systems that can be interfaced via electronic communication systems throughout the SOF community. The SOFPARS effort meets the joint requirement to ensure interoperability and standardization of the mission planning process between SOF and the Services. Develops Aircraft / Weapons / Electronics modules for MH-60G/K/L, MH-47E/D, MH-53J, MC-130E/H, AC-130H/U, A/H-6, HC-130P/N, and CV-22.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	DATE
RDT&E, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project S350	MARCH 1996

FY 1995 ACCOMPLISHMENTS:

- (\$306K) Continued Common Mapping Production System (CMPS) development.
- (\$1,505K) Continued development of Air Force Mission Support System (AFMSS) Block C2.0 and C2.0+ (now C2.1) software.
- (\$276K) Completed SOFPARS Version 1.0 software development.
- (\$470K) Developed Technical Orders and Technical Manuals requirements definition.

FY 1996 PLAN:

- (\$720K) Continue AFMSS Aircraft/Weapons/Electronics (A/W/E) interface software module development for all SOF aircraft.
- (\$1,500K) Complete block C2.0 and C2.0+ (now C2.1) software development. Start development of AFMSS 3.0 software.
- (\$3,014K) Complete CMPS development, develop AFMSS interfaces and Portable Computer (PC) Flight Planning System (PFPS) interfaces.
- (\$4,222K) Begin software module enhancements to the PC PFPS to integrate and extend SOF A/W/E software modules to include interface with the AFMSS component of SOFPARS.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	DATE	MARCH 1996
RDT&E, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project S350		

FY 1997 PLAN:

- (\$2,030K) Continue Air Force Mission Support System (AFMSS) C3.0 software development.
- (\$1,500K) Continue developing AFMSS interfaces and the Portable Computer (PC) Flight Planning System (PFPS) interfaces.
- (\$3,909K) Continue PC PFPS enhancements to include aircraft/weapons/electronics interface software module development for all SOF aircraft.

ACQUISITION STRATEGY:

Develop mission planning software to support SOF operations leveraging ongoing efforts with common PC PFPS and AFMSS requirements. Integration of PC PFPS and AFMSS to support SOF requirements maximizes use of commercial off-the-shelf software technology and components to reduce overall costs and schedule. Contract strategy combines various contracts and types to include competitively awarded cost plus and sole source cost no fee (educational institution) contracts. Maximize use of existing hardware technology procured via firm fixed price contract to take advantage of software portability and open system architecture. Focuses on aircraft / weapons / electronics interface required to initialize and upload aircraft avionics through the use of electronic data transfer devices. Uses software support facility to maintain and update software.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE	
APPROPRIATION / BUDGET ACTIVITY		MARCH 1996	
RDT&E, DEFENSEWIDE / 7 PE 1160404BB Special Operations Tactical Systems Development / Project S350			
B. Program Change Summary			
Previous President's Budget	FY95	FY96	FY97
Appropriated Value	2.087	9.653	6.678
Adjustments to Appropriated Value / President's Budget	2.201	9.653	Cont.
Current Budget Submit	.356	(.197)	.761
Change Summary Explanation:	2.557	9.456	7.439
Funding:	FY 1995 adjustment was for Congressional reduction in consulting services and an increase for Technical Orders and Technical Manual development. FY 1996 decrease is for Congressional inflation adjustments and overhead/management savings. FY 1997 adjustment is for development of critical SOF Common Module requirements and includes a decrease due to repricing of budgets to reflect the Administrations revised economic assumptions forecast.		
Schedule:	Software blocks are defined by funding and time. Cost overruns have caused blocks C2.0 to be restructured into C2.0 and C2.0+ (now C2.1) and Air Force Mission Support System C3.0 and have been deferred accordingly. SOFPARS Functional Configuration Audit/Physical Configuration Audit (FCA/PCA) was satisfied by Block C1.0 FCA/PCA due to common core baseline.		
Technical:	Mission Planning technical architecture has been expanded to include integration of requirements into the Portable Computer Flight Planning System and the Air Force Mission Support System. Expansion is to take best advantage of existing mission planning software and hardware and commercial off-the-shelf software to reduce overall cost and		

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APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE / PROJECT NO.							
RDT&E, DEFENSEWIDE / 7		PE 1160404BB Special Operations Tactical Systems Development / Project S350							
schedule.									
C. Other Program Funding Summary	FY95	FY96	FY97	FY98	FY99	FY00	FY01		
PROC, SOFPARS	6.490	1.090	1.876	.570	1.132	4.496	4.835		
D. Schedule Profile	FY95	FY96	FY97	FY98	FY99	FY00	FY01		
Block C1.0 Functional Configuration Audit (FCA)/Physical Configuration Audit (PCA)	1	2	3	4	1	2	3		
SOFPARS Version 1 FCA/PCA									
Block C2.0 FCA/PCA	x								
Block C2.0+(now C2.1) FCA/PCA									
AFMSS 3.0 Development Contract Award									
Block C2.2 Award							x		
Block C2.2 FCA/PCA							x		

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE	MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project S350		
A. Project Cost Breakdown (\$ in thousands)		<u>FY95</u>	<u>FY96</u>
			<u>FY97</u>
1. Air Force Mission Support System Mission Planning Core	1,505	1,500	2,030
2. Aircraft, Weapons, Electronics Interfaces and SOF Common Module/Interfaces	1,052	7,936	5,409
TOTAL:	2,557	9,456	7,439

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)				DATE MARCH 1996													
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project S350															
B. Budget Acquisition History and Planning Information																	
Performing Organizations																	
Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY95	Budget FY95	Budget FY97										
Product Development Organizations	Various	Various	Cont.	19,760	2,391	6,326	5,475										
Support and Management Organizations	Various	Various	Cont.	5,543	166	3,130	1,964										
Test and Evaluation Organizations																	
Government Furnished Property																	
Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date	Total Prior to FY95	Budget FY95	Budget FY97	Budget to Complete										
Subtotal Product Development				19,760	2,391	6,323	5,475										
Subtotal Support and Management				5,543	166	3,130	1,964										
Subtotal Test and Evaluation																	
Total Project				25,303	2,557	9,456	7,439										

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED		DATE		MARCH 1996	
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE / PROJECT NO.					
RDT&E, DEFENSEWIDE / 7		PE 1160404BB Special Operations Tactical Systems Development / Project S375					
COST (In Millions)		FY95	FY96	FY97	FY98	FY99	FY00
S375, Weapons and Support Systems Advanced Development		0	.150	1.986	2.204	1.760	3.453
						2.543	. Cont.
							Total Cost Cont.

A. Mission Description and Budget Item Justification

Special Operations Forces (SOF) often deploy as small, independent, quick reaction, foot-mobile teams independent of primary logistics support. Existing weapons and fire control are frequently too heavy to use under these conditions. This project provides for developing and testing of specialized, lightweight individual weapons, fire control and tactical surveillance equipment to meet the unique requirements of SOF. This is a continuing program. Sub-projects include:

- Battle Dress System (BDS). BDS is a multi-layer, head-to-toe protection, clothing, and load bearing system which provides protection against weather extremes, ballistic threats, chemical and biological threats, and enemy detection. BDS will also provide an adaptable load-bearing capability. Subsystems will be acquired in phases as technology matures.
- M4A1 Carbine SOF Accessories Kit. SOF variant of standard Army M4 Carbine. Allows mounting of optional accessories (up to 30 different functions/capabilities) such as laser pointer, active aiming module, and night vision/thermal imaging devices and provides fully automatic capabilities. This includes integrated night/day observation/fire control device which is an integrated day/night image intensification scope for both fire control and observation for the M4A1 Carbine.

FY 1995 ACCOMPLISHMENTS: None.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)			
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S375	DATE	MARCH 1996
UNCLASSIFIED			
FY 1996 PLAN:			
<ul style="list-style-type: none"> ● (\$150K) Battle Dress System (BDS). Initiate load bearing and body armor technology studies to identify materials and fabrics which provide measurable improvement over existing load-bearing and body armor systems. 			
FY 1997 PLAN:			
<ul style="list-style-type: none"> ● (\$242K) BDS. Develop and test body armor / load bearing equipment prototypes. ● (\$1,744K) M4A1 Carbine SOF Accessories Kit. Award Integrated Night / Day Observation / Fire Control Device (INOD) development contract. 			
ACQUISITION STRATEGY:			
<ul style="list-style-type: none"> ● M4A1 Carbine SOF Accessories Kits. The INOD follows a streamlined acquisition strategy calling for a cost plus development contract award to a single contractor following full and open competition solicitation. The solicitation will be based upon performance specifications flowing from the system's operational requirements document. Production options will be tied to the development contract, incentivizing the contractor to meet or exceed the critical parameters of the performance specification. The system will be required to undergo a combined developmental / operational test prior to a production decision. 			

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED		DATE		MARCH 1996	
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S375					
B. Program Change Summary		FY95	FY96	FY97	Total Cost		
Previous President's Budget			.199	2.298	Cont.		
Appropriated Value			.199				
Adjustments to Appropriated Value / President's Budget		(.049)		(.312)			
Current Budget Submit		.150	1.986		Cont.		
Change Summary Explanation:							
Funding:	FY 1996 decrease for Congressional inflation adjustment, overhead/management savings, and to fund higher priority MFP-11 requirements. FY 1997 decrease due to repricing of budgets to reflect the Administration's revised economic assumptions forecast.						
Schedule:	None.						
Technical:	None.						
C. Other Program Funding Summary		FY95	FY96	FY97	FY98	FY99	FY00
PROC, SOF Small Arms & Spt. Equip.	8.804	10.764	10.613	6.966	10.795	2.320	5.119
						To Complete	Total Cost
						Cont.	Cont.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE		MARCH 1996				
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S375						
		FY95		FY96		FY97		
D. Schedule Profile		1	2	3	4	1	2	3
Battle Dress System								
Initiate Studies						x		
MS I						x		
M4A1 Carbine SOF Accessories Kit								
MS III on Scope, Suppressor, Rail				x				
MS III on Reflex Scope					x			
MS III Balance of Accessories (less INOD)						x		
INOD Contract Award							x	

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE MARCH 1996	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project S375		
A. <u>Project Cost Breakdown (\$ in thousands)</u>			
1. M4A1 Carbine SOF Accessories Kits			
INOD Development			1,744
2. Battle Dress System		150	242
TOTAL:		150	1,986

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE MARCH 1996	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project S375	
B. Budget Acquisition History and Planning Information		Actual or Budget Value (\$ in thousands)	
Performing Organizations			
Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC
Product Development Organizations	C/C/PF ^F MPR	Mar 96 Var	NA NA
Support and Management Organizations			
Test and Evaluation Organizations			
Government Furnished Property			
Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date
			Total Prior to FY95
			Budget FY96
			Budget FY97
			Budget to Complete
			Total Program
Subtotal Product Development			150
Subtotal Support and Management			242
Subtotal Test and Evaluation			1,744
Total Project			1,986
			Cont. Cont.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									
APPROPRIATION / BUDGET ACTIVITY									
RDT&E, DEFENSEWIDE / 7									
COST (In Millions)									
	FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost
S625, SOF Training Systems	0	2.437	9.759	11.985	8.103	9.333	1.871	Cont.	Cont.

A. Mission Description and Budget Item Justification

This project funds analysis, development, test, and integration of SOF aviation-related training and mission rehearsal systems and upgrades. Sub-projects include:

- AC-130U Gunship Aircrew / Maintenance Training System (GA/MTS). The GA/MTS develops an integrated, ground-based combination training and mission rehearsal system to support initial, mission, special qualification, continuation, upgrade and maintenance training for the AC-130U Gunship aircrews. The need for GA/MTS is driven by the lack of any current training or mission rehearsal capability for the aircrew and maintenance personnel. The GA/MTS will consist of two primary components. The first component, a Battle Management Center (BMC) testbed, will refine requirements for system fidelity and provide an initial operational capability for the Navigator Fire Control Officer (NAV/FCO) crew stations. The second component will build a complete BMC with NAV/FCO, sensor operator and electronic warfare crew stations and a flight deck with full fidelity, six (6) degree of freedom motion simulation for the pilots and flight engineers. Additionally, the Instructor Operator Station will provide role-playing capabilities for the gunner and loadmaster. GA/MTS will be networked with other AFSSOC mission rehearsal devices.
- MH-47E/MH-60K Evans & Sutherland Image Generator (ESIG) 4000. This effort integrates an image generator into the MH-47E/MH-60K training system. The ESIG 4000 will enhance the MH-47E/MH-60K combat mission simulators and fulfill the requirement for training and mission rehearsal capability.

FY 1995 ACCOMPLISHMENTS: NA.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE	
APPROPRIATION / BUDGET ACTIVITY		PROJECT NO.	
RDT&E, DEFENSEWIDE / 7		PE 1160404BB Special Operations Tactical Systems Development / Project S625	
FY 1996 PLAN:			
<ul style="list-style-type: none"> ● (\$1,000K) AC-130U Gunship Aircrew / Maintenance Training System (GA/MTS). Begin development of Battle Management Center (BMC) testbed to refine user requirements for navigator and fire control officer workstations. ● (\$1,100K) MH-47E/MH-60K Evans & Sutherland Image Generator (ESIG) 4000. Award integration contract. ● (\$337K) Program Management Office support. 			
FY 1997 PLAN:			
<ul style="list-style-type: none"> ● (\$7,779K) AC-130U GA/MTS. Continue development of the BMC testbed. ● (\$990K) MH-47E/MH-60K ESIG 4000. Continue integration effort. ● (\$990K) Program Management Office support. 			
ACQUISITION STRATEGY:			
<ul style="list-style-type: none"> ● GA/MTS. Program is currently in Phase I. The two-phase acquisition strategy will first build a BMC testbed using production AC-130U avionics, commercial image generation, and computers to refine user requirements prior to the second phase, a full and open competition to procure a complete BMC and Flight Deck Aircrew Training Device (ATD). A Milestone II/III decision is planned for 4QFY97 to support a 1QFY98 competitive contract award for the ATD. ● MH-47E/MH-60K Evans & Sutherland Image Generator (ESIG) 4000. A contract will be awarded 3QTR 1996 to integrate the ESIG 4000 with the MH-47E and MH-60K combat mission simulators. 			

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	DATE	MARCH 1996
RDTE, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project S625		
B. Program Change Summary			
Previous President's Budget	FY95	FY96	FY97
Appropriated Value		2.488	7.861
Adjustments to Appropriated Value / President's Budget		2.488	
Current Budget Submit		(.51)	1.898
Change Summary Explanation:		2.437	9.759
			Cont.
Funding:	FY 1996 decrease for Congressional inflation adjustment and overhead/management savings. FY 1997 increase is to properly phase funds for program execution.		
Schedule:	None.		
Technical:	None.		
C. Other Program Funding Summary			
PROC, SOF Training Systems	FY95 21.151	FY96 1.074	FY97 .477
	FY98 8.535	FY99 8.535	FY00 0
			To Complete
			Total Cost
			31.237

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE	
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	MARCH 1996	
RDT&E, DEFENSEWIDE / 7		PE 1160404BB Special Operations Tactical Systems Development / Project S625	
		FY95	FY96
D. Schedule Profile	1 2 3 4 1 2 3 4 1 2 3 4	1 2 3 4 1 2 3 4 1 2 3 4	FY97
Begin prototyping of Battle Management Center		X	
Image Generator Integration Contract Award		X	
GA/MTS Milestone II/III		X	

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE	MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project S625		
A. Project Cost Breakdown (\$ in thousands)		<u>FY95</u>	<u>FY96</u>
1. AC-130U Aircrew Maintenance Training System		1,000	7,779
2. MH-47E/MH-60K ESIG 4000 Integration		1,100	990
3. Mission Support		337	990
TOTAL:		0	2,437
			9,759

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APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project S625		DATE MARCH 1996			
B. Budget Acquisition History and Planning Information		Actual or Budget Value (\$ in thousands)					
Performing Organizations							
Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY95		
Product Development Organizations	SS/CPAF SS/FTP	Mar 96 Apr 96			Budget FY95		
Air Force (GAMTS) Air Force (ESIG 4000 Integration)					Budget FY96		
Support and Management Organizations					Budget FY97		
Air Force					Budget to Complete		
Test and Evaluation Organizations					Total Program		
Government Furnished Property							
Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date	Total Prior to FY95	Budget FY95		
					Budget FY96		
					Budget FY97		
					Budget to Complete		
					Total Program		
Subtotal Product Development					2,100		
Subtotal Support and Management					337		
Subtotal Test and Evaluation					990		
Total Project					2,437		
					9,759		
					Cont.		
					Cont.		
					Cont.		

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	
APPROPRIATION / BUDGET ACTIVITY		DATE	
RDT&E, DEFENSEWIDE / 7		MARCH 1996	
R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S700			

COST (In Millions)	FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost
\$700, Communications Advanced Development	4.138	1.457	2.648	2.064	3.421	2.487	4.113	- Cont.	Cont.

A. Mission Description and Budget Item Justification

This project provides for development and testing of selected items of specialized equipment to meet the unique requirements of Special Operations Forces (SOF). Specialized equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. These operations are generally conducted in harsh environments, for unspecified periods, and in locations requiring small unit autonomy. Special Operations Forces must infiltrate by land, sea, and air to conduct unconventional warfare, direct actions, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to threat forces to ensure mission success.

USSOCOM has developed an overall strategy to ensure that Command, Control, Communications, Computers, and Intelligence (C4I) systems continue to provide SOF with the required capabilities into the 21st century. USSOCOM's C4I systems comprise an integrated network of systems providing positive command and control and timely exchange of intelligence and threat warning to all organizational echelons. The C4I systems that support this new architecture will employ the latest standards and technology by transitioning from separate systems to full integration with the infosphere. The infosphere will allow SOF elements to operate with any force combination in multiple environments. The C4I programs funded in this project are grouped by the level of organizational element they support: Operational Element (Team), Above Operational Element (Deployed), and Above Operational Element (Garrison). Sub-projects include:

OPERATIONAL ELEMENT (TEAM)

- Multi-Band Inter/Intra Team Radio (MBITR). The MBITR provides inter-team radios for SOF components and eliminates the

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S700

need for multiple radios currently required to support Special Tactics units performing air traffic control instructions, flight data, artillery advisories, forward air rapid refueling point operations and liaison communications with ground force commander.

- **Special Mission Radio System (SMRS).** SMRS is a radio system that provides SOF a lightweight, Low Probability of Intercept/Low Probability of Detection (LPI/LPD) high frequency radio with co-resident military standard Automatic Link Establishment (ALE), non-standard ALE, and internal communication security capabilities. Deployed in hostile and clandestine environments, the system consists of manpack radio and base station, and provides hardware improvements and software documentation.
 - **Multiband/Multimission Radio (MBMMR).** A joint SOF requirement, MBMMR provides a lightweight, secure, manpackable transceiver capability replacing the AN/PRC-77, AN/PRC-85, AN/PRC-113, HST-4, and LST-5B/C. MBMMR provides VHF-FM, VHF-AM, UHF-AM, and UHF-FM satellite communications in a single radio, reducing the number of team radios carried by each team. Current deployments require teams to carry a minimum of five radios capable of operating in seven frequency bands.
- ABOVE OPERATIONAL ELEMENT (DEPLOYED)**
- SMRS is also planned for use at this level.
 - **Joint Base Station (JBS).** JBS consolidates three former programs: Naval Special Warfare Task Unit Van (now called JBS Core System), Special Forces Base Station (now called JBS Variant 1), and Special Operations Communications Package (now called JBS Variant 2) into one joint program. JBS will provide SOF with continuous, reliable, long-range communications among SOF component commands while allowing for differences in missions. JBS will contain line-of-sight (LOS) and beyond-LOS radios, and associated message handling and switching equipment, providing command and control voice, imagery, data, and facsimile. JBS can be transported aboard C-130 aircraft.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE	R-1 ITEM NOMENCLATURE / PROJECT NO.	DATE
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	MARCH 1996	PE 1160404BB Special Operations Tactical Systems Development / Project S700	MARCH 1996
<ul style="list-style-type: none"> ● SOF Tactical Assured Connectivity Systems (SOFTACS) (formerly called Tactical C4I Mod). SOFTACS is an integrated suite of communications systems designed to support the high-capacity, digital, secure, interoperable, transmission and switching requirements of USSOCOM C4I architecture. 			
<p>ABOVE OPERATIONAL ELEMENT (GARRISON)</p> <ul style="list-style-type: none"> ● Special Mission Radio System (SMRS) is also planned for use at this level. 			
<p>FY 1995 ACCOMPLISHMENTS:</p> <ul style="list-style-type: none"> ● (\$2,175K) Joint Base Station (JBS). Performed Variant 1 engineering and manufacturing development for automation requirement and finalized selected design. ● (\$1,963K) SMRS. Developed high frequency communications mode enhancements and Digital Message Entry Device (DMED) ruggedization. Developed concept for worldwide HF interlocking base station network. Initiated testing of high frequency HF communication mode enhancements and DMED ruggedization. 			
<p>FY 1996 PLAN:</p> <ul style="list-style-type: none"> ● (\$698K) SMRS. Continue testing of the HF communications mode enhancements and DMED ruggedization. ● (\$167K) SOF Tactical Assured Connectivity Systems. Perform system integration, test and evaluation. ● (\$334K) JBS. Perform Core System engineering, development, integration, and testing for technology insertion of Non-Developmental Item/Commercial Off-the-Shelf/Government Off-the-Shelf equipment. 			

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	DATE MARCH 1996
R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S700	
<ul style="list-style-type: none"> ● (\$258K) Multiband/Multimission Radio (MBMMR). Conduct Milestone 0/I review. Conduct market survey and release draft request for proposal. 	
<p>FY 1997 PLAN:</p> <ul style="list-style-type: none"> ● (\$388K) Multi-Band Inter/Intra Team Radio (MBITR). Conduct Milestone 0/I review. Conduct market survey and release draft request for proposal. ● (\$1,157K) SMRS. Develop a conventional tactical satellite capability (i.e., satellite waveform enhancement and satellite communications networking capability). ● (\$767K) SOF Tactical Assured Connectivity Systems. Complete system test and evaluation. ● (\$336K) Joint Base Station. Continue Core System engineering, development, integration, and testing for technology insertion of Non-Developmental Item/Commercial Off-the-Shelf/Government Off-the-Shelf equipment. 	
<p>ACQUISITION STRATEGY:</p> <ul style="list-style-type: none"> ● Special Mission Radio System. Performance capability of the manpack and base station radios will be improved through planned product improvements. Following a Milestone II decision to modify the baseline radio, engineering and manufacturing development will be accomplished, improvements will be developed and tested, and the baseline system will be enhanced to meet mission requirements. 	

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	DATE	MARCH 1996
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE / PROJECT NO.	PE 1160404BB Special Operations Tactical Systems Development / Project S700	
B. Program Change Summary			FY95	FY96
Previous President's Budget			3.382	1.727
Appropriated Value			3.639	1.727
Adjustments to Appropriated Value / President's Budget			.499	(.270)
Current Budget Submit			4.138	1.457
Change Summary Explanation:				2.648
Funding:	This project contains several sub-projects. FY 1995 net increase is the result of a Congressional reduction of Defensewide RDT&E for travel, civilian pay and a directed Department of Energy reprogramming, a Congressional reduction in consulting services, and a reprogramming of excess funds to terminate DE14 Joint Advanced Special Operations Radio System to the Special Mission Radio System (SMRS). FY 1996 decrease is a Congressional reduction for inflation adjustment and overhead/management savings, revised OMB economic assumptions, and a reprogramming to fund high priority D476 PSYOP Advanced Development project (Special Operations Media System B). FY 1997 net increase is a result of an increase in Multi-Band Inter/Intra Team Radio market survey and Milestone 0/I preparations and a decrease due to repricing of budgets to reflect the Administration's revised economic assumptions forecast.			
Technical:	None.			
Schedule:	The Special Mission Radio System evolutionary acquisition strategy has been changed to require a Milestone II, vice IV, decision to modify the baseline radio. The FY 1995 Milestone II, previously planned as Milestone IV, has slipped four months due to increased time required for planning and program documentation.			

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE	MARCH 1996
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE / PROJECT NO.	
RDT&E, DEFENSEWIDE / '7		PE 1160404BB Special Operations Tactical Systems Development / Project S700	

C. Other Program Funding Summary

	FY95	FY96	FY97	FY98	FY99	FY00	FY01	To Complete	Total Cost
PROC, Comm & Electronics	19.610	33.349	26.617	30.116	49.606	46.100	38.705	Cont.	Cont.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED		DATE		MARCH 1996	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S700					
D. Schedule Profile		FY95		FY96		FY97	
Multiband/Multimission Radio MS 0		1	2	3	4	1	2
Multi-Band Inter/Intra Team Radio MS 0/I				2	3	4	1
Special Mission Radio System MS II*					x		x
MS III						x	
SOF Tactical Assured Connectivity System							
MS I		x					
MS II			x				
MS III				x			
Joint Base Station							
MS III (Core System)		x					
Variants 1 and 2 Prelim. Design Review				x			
Variants 1 and 2 Critical Design Review					x		
MS II* (Core System)						x	

*MS II decisions will be conducted for P3I insertions as technologies mature.

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE MARCH 1996	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project S700	
A. Project Cost Breakdown (\$ in thousands)		FY95	FY96
1. Joint Base Station	2,175	334	336
2. Special Mission Radio System			
Interlocking Base Station Concept Development	500		
Engineering Development Model	1,000		1,157
Development/Customer Test	463	698	
3. SOF Tactical Assured Connectivity		167	767
4. Multi-Band Inter/Intra Team Radio		388	
5. Multiband/Multimission Radio	258		
TOTAL:	4,138	1,457	2,648

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)				DATE MARCH 1995							
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project S700									
B. Budget Acquisition History and Planning Information		Actual or Budget Value (\$ in thousands)									
Performing Organizations											
Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Offices EAC	Total Prior to FY95	Budget FY95	Budget FY97				
Product Development Organizations	MIPR/ALLOT CPFF CPFF MIPR ALLOT ALLOT	Various Jun 93 Oct 93 Various Various Various			1,147 5,472 603 5,782		258 167				
USSOCOM, Tampa, FL USA FM SATCOM/CECOM, Ft Mon. NJ SSDS, Englewood CO Mitre, McLean VA NAWC-AD, St. Inigoes MD NSMA, Arlington, VA DISA, Reston VA					2,638 1,000 \$00	256 698	388 767				
Support and Management Organizations	CPFF	Oct 93			516						
Booz Allen Hamilton, McLean VA						78	Cont.				
Test and Evaluation Organizations							Cont.				
Government Furnished Property											
Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date	Total Prior to FY95	Budget FY95	Budget FY96	Budget to Complete				
Subtotal Product Development				13,004	4,138	1,379	2,648				
Subtotal Support and Management				516		78	Cont.				
Subtotal Test and Evaluation							Cont.				
Total Project				13,520	4,138	1,457	2,648				
							Cont.				

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	MARCH 1996

COST (In Millions)	FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost
\$800, Special Operations Munitions Advanced Development	11.458	7.639	9.016	3.212	2.740	9.775	11.918	Cont.	Cont.

A. Mission Description and Budget Item Justification

This project provides for the acquisition of selected, specialized munitions and equipment to meet unique Special Operations Forces (SOF) requirements. This is a continuing program. Sub-projects include:

- Ammunition Development. Air Force Special Operations Command requires a high fragmentation round to defeat light material and personnel targets in order to conduct close air support in increasingly hostile environments while reducing Gunship exposure to anti-aircraft fire, thereby increasing survivability. Additionally, a 105mm guided projectile is required to improve first shot kill capabilities for hardened mobile and stationary targets while minimizing collateral damage. This effort will further diminish technical risk for new ammunition development.
- Lethality Enhancements. Project acquires a laser sensor capable to demonstrate the capability of markedly improving AC-130 Gunship first shot accuracy by measuring wind to the target in real-time and using it in the fire control solution, thereby eliminating the need to do a live fire tweak prior to engagement. Additionally, a front end analysis to develop necessary improvements to the gun suite for a 25-30 year life cycle will begin. This analysis is critical due to the current inadequacy at the 20mm system and a paradigm shift that has occurred due to necessity of missions requiring increased standoff ranges and the resulting lack of effectiveness.
- Penetration Augmented Munition. Presently SOF has a limited capability to significantly damage concrete structures or pylons assigned as targets. This program develops a man portable, one step setup munition system with increased penetrating capability and greater warhead explosiveness.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.
RDT&E, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project S800
<ul style="list-style-type: none"> ● Remote Activated Munitions System (RAMS). Provides a capability to remotely control detonation of demolition charges or the remote operation of other items of equipment such as beacons, laser markers, radio functions, and weapons. ● Special Operations Forces (SOF) Demolition Kit. The kit consists of inert warhead liners, shaped charges, tools, equipment, and attachment devices for constructing and emplacing a variety of demolition charges. The kit allows the SOF operator to tailor the demolition charges to the target providing greater lethality and mission flexibility. 	
<p>FY 1995 ACCOMPLISHMENTS:</p> <ul style="list-style-type: none"> ● (\$1,823K) Ammunition Development. Completed development and testing of an 40mm fuze for fuze retrofit. Completed modification for a hardened improved penetrator for the 105mm MK399 fuze and reported the results of foreign and domestic fuze inventory analysis. ● (\$2,210K) Lethality Enhancements. Completed modification and hardware/software prototypes for the gun suite laser sensor. Developed an analysis effort between Aeronautical Systems Center and Army Development and Engineering Center at Picatinny Arsenal to complete front end analysis for up gun and seeker guidance efforts. ● (\$5,492K) Penetration Augmented Munition. Conducted environmental testing of components, continued firing train design, and conducted system integration tests. ● (\$1,348K) RAMS. Fabricated and evaluated test hardware. Initiated technical test/user test. ● (\$585K) SOF Demolition Kit: Initiated program. Conducted initial design, fabrication, and test of inert warheads. 	

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.
RDT&E, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project S800
FY 1996 PLAN:	
<ul style="list-style-type: none"> ● (\$735K) Ammunition Development. Transition the PGU-9A/B fuze retrofit project to sustainment. Formulate a program to develop a high fragmentation 105mm round. Complete analysis for an advanced prototype of a guided 105mm projectile and advance to a Milestone 0 decision. Review technical data package. ● (\$735K) Lethality Enhancements. Complete flight testing of laser sensor and advance program to engineering, manufacturing and development. Complete medium caliber analysis project. ● (\$2,984K) Penetration Augmented Munition (PAM). Conduct tactical systems integration tests, build and test contractor demonstration hardware, and conduct preliminary and critical design reviews. ● (\$2,366K) Remote Activated Munitions System (RAMS). Continue Engineering and Manufacturing Development (EMD) and complete testing. Produce technical data package for the transmitter, auxiliary power supply and Type A Receiver. ● (\$819K) Special Operations Forces Demolition Kit. Continue design, fabrication and testing of inert warheads. 	
FY 1997 PLAN:	
<ul style="list-style-type: none"> ● (\$484K) Ammunition Development. Transition adaptable munitions identified through the analysis projects to full program integration for high fragmentation and guided ammunition. ● (\$3,572K) PAM. Complete EMD, testing, and conduct Milestone III review. ● (\$3,507K) RAMS. Complete technical data package for the transmitter, auxiliary power supply and Type A receiver. 	

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE																				
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.																				
RDT&E, DEFENSEWIDE / 7	PE 1160404BB Special Operations Tactical Systems Development / Project S800																				
<p>Conduct Milestone III review for transmitter and Type A receiver. Initiate design of Type B receiver.</p> <ul style="list-style-type: none"> • (\$1,453K) Special Operations Forces (SOF) Demolition Kit. Complete Engineering and Manufacturing Development (EMD), testing, and conduct Milestone III review. 																					
<p>ACQUISITION STRATEGY:</p> <ul style="list-style-type: none"> • Penetration Augmented Munition. Program managed by the Army Project Manager for Mines, Countermeasures and Demolitions. Competitively awarded a cost plus EMD contract. Procurement will be firm fixed price sole source with option to the development contractor. • Remote Activated Munitions System. Developmental program managed by the Army Project Manager for Mines, Countermeasures and Demolitions. Design being developed by government engineering at the Army Research Laboratory. • SOF Demolition Kit. Developmental program managed by the Army Project Manager for Mines, Countermeasures and Demolitions. Design being developed by government engineering at the Waterways Experimental Station and Picatinny Arsenal. 																					
<p>B. <u>Program Change Summary</u></p> <table> <tr> <td>Previous President's Budget</td> <td>FY95</td> <td>FY96</td> <td>FY97</td> <td>Total Cost</td> </tr> <tr> <td>Appropriated Value</td> <td>9.240</td> <td>8.254</td> <td>7.409</td> <td>Cont.</td> </tr> <tr> <td>Adjustments to Appropriated Value / President's Budget</td> <td>2.218</td> <td>(.615)</td> <td>1.607</td> <td></td> </tr> <tr> <td>Current Budget Submit</td> <td>11.458</td> <td>7.639</td> <td>9.016</td> <td>Cont.</td> </tr> </table>		Previous President's Budget	FY95	FY96	FY97	Total Cost	Appropriated Value	9.240	8.254	7.409	Cont.	Adjustments to Appropriated Value / President's Budget	2.218	(.615)	1.607		Current Budget Submit	11.458	7.639	9.016	Cont.
Previous President's Budget	FY95	FY96	FY97	Total Cost																	
Appropriated Value	9.240	8.254	7.409	Cont.																	
Adjustments to Appropriated Value / President's Budget	2.218	(.615)	1.607																		
Current Budget Submit	11.458	7.639	9.016	Cont.																	

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APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S800																																			
		DATE MARCH 1996																																			
Change Summary Explanation:																																					
<p>Funding: FY 1995 and FY 1997 increase is to fully fund Penetration Augmented Munition (PAM) design and testing. FY 1996 decrease includes Congressional inflation adjustments, overhead / management savings, and revised Office of Management and Budget economic assumptions.</p> <p>Schedule: Improved 105mm Round program slipped 1 year due to consolidation of multiple 105mm projects.</p> <p>Technical: None.</p>																																					
<p>C. Other Program Funding Summary</p> <table> <thead> <tr> <th></th> <th>FY95</th> <th>FY96</th> <th>FY97</th> <th>FY98</th> <th>FY99</th> <th>FY00</th> <th>FY01</th> <th>To Complete</th> <th>Total Cost</th> </tr> </thead> <tbody> <tr> <td>PROC, Ordnance Acq.</td> <td>13.224</td> <td>18.689</td> <td>6.161</td> <td>13.380</td> <td>13.571</td> <td>4.646</td> <td>3.260</td> <td>Cont.</td> <td>Cont.</td> </tr> <tr> <td>PROC, Platform Gun Ammo</td> <td></td> <td>40.148</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>									FY95	FY96	FY97	FY98	FY99	FY00	FY01	To Complete	Total Cost	PROC, Ordnance Acq.	13.224	18.689	6.161	13.380	13.571	4.646	3.260	Cont.	Cont.	PROC, Platform Gun Ammo		40.148							
	FY95	FY96	FY97	FY98	FY99	FY00	FY01	To Complete	Total Cost																												
PROC, Ordnance Acq.	13.224	18.689	6.161	13.380	13.571	4.646	3.260	Cont.	Cont.																												
PROC, Platform Gun Ammo		40.148																																			

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APPROPRIATION / BUDGET ACTIVITY		DATE MARCH 1996						
RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations Tactical Systems Development / Project S800						
		FY95		FY96		FY97		
1	2	3	4	1	2	3	4	1
D. Schedule Profile								
Ammo Development								
105 mm MS 0/I								
Lethality Enhancements								
MS 0								
SOF Demolition Kit								
MS I/II								
MS III								
Penetration Augmented Munition								
MS III								
Remote Activated Munitions System								
MS I/II								
MS III								

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE MARCH 1996	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project S800	
A. Project Cost Breakdown (\$ in thousands)		FY95	FY96
1. Ammunition Development		1,823	735
AC-130U Gunship Ammo Development		2,210	735
2. AC-130 Gunship Lethality Enhancements			
4. Demolition Kit		585	819
Engineering Development/Test/Fabricate Materials			
5. Penetration Augmented Munition		5,492	2,984
Engineering Development/Test/Fabricate Materials			
6. Remote Activated Munitions System		1,348	2,366
Engineering Development/Test/Fabricate Materials			
TOTAL:		11,458	7,639
			9,016

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)				DATE MARCH 1996							
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE PE 1160404BB Special Operations Tactical Systems Development / Project S800									
B. Budget Acquisition History and Planning Information		Actual or Budget Value (\$ in thousands)									
Performing Organizations											
Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY95	Budget FY95	Budget FY96				
Product Development Organizations	ALLOT	various	NA	NA	4,007	2,593	1,470				
Air Force Materiel Command, LIV-A	ALLOT	various	NA	NA	32,266	3,224	4,195				
Army PM-MCD, ARDEC	CPF	Jul 88	29,945	29,945	22,877	4,201	1,974				
Support and Management Organizations											
Test and Evaluation Organizations	ALLOT	Dec 94	1,500	1,500							
AF Special Mission OT&E Center											
Government Furnished Property											
Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date	Total Prior to FY95	Budget FY95	Budget FY96	Budget to Complete				
Subtotal Product Development				\$9,150	9,958	7,639	9,016				
Subtotal Support and Management							Cont.				
Subtotal Test and Evaluation					1,500						
Total Project				\$9,150	11,458	7,639	9,016				
						Cont.	Cont.				

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE						
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7				R-1 ITEM NOMENCLATURE PE 1160405BB Special Operations Intelligence Systems Development						
COST (in millions)		FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost
PE 1160405BB (Special Operations Intelligence Systems Development)		3.987	2.843	1.315	4.996	2.446	2.626	3.392	Cont.	Cont.
S400, SOF Intelligence R&D		3.987	2.843	1.315	4.996	2.446	2.626	3.392	Cont.	Cont.

A. Mission Description and Budget Item Justification

Projects provide for identification, development, testing, and integration of selected SOF intelligence equipment to eliminate deficiencies in providing timely intelligence to deployed forces.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		MARCH 1996	
COST (In Millions)	FY95	FY96	FY97
S400, SOF Intelligence R&D	3.987	2.843	1.315
	4.996	2.446	2.626
			3.392
			Cont.
			Cost to Complete
			Total Cost
			Cont.

A. Mission Description and Budget Item Justification

This project provides for the identification, development, and testing of Special Operations Forces (SOF) intelligence equipment to identify and eliminate deficiencies in providing timely intelligence to deployed forces. The following distinct sub-projects address the primary areas of intelligence dissemination, sensor systems, integrated threat warning to SOF mission platforms, and tactical exploitation of national capabilities. USSOCOM has developed an overall strategy to ensure that Command, Control, Communications, Computers, and Intelligence (C4I) systems continue to provide SOF with the required capabilities into the 21st century. USSOCOM's C4I systems comprise an integrated network of systems providing positive command and control and timely exchange of intelligence and threat warning to all organizational echelons. The C4I systems that support this new architecture will employ the latest standards and technology by transitioning from separate systems to full integration with the infosphere. The infosphere will allow SOF elements to operate with any force combination in multiple environments. The C4I programs funded in this project are grouped by the level of organizational element they support: Operational Element (Team), Above Operational Element (Deployed), and Above Operational Element (Garrison). Sub-projects include:

OPERATIONAL ELEMENT (TEAM)

- SOF Signal Intelligence Manpack System (SSMS). SSMS is part of an evolutionary Joint Threat Warning System migration being developed to meet the current and developing threat capabilities for a miniaturized system to meet the backpack mission requirement. SSMS provides an own force protection capability through a communications monitoring and direction finding capability. SSMS is a man transportable jump tested system weighing less than 20 pounds in the mobile, manpack configuration.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160405BB Special Operations Intelligence Systems Development / Project S400	
<ul style="list-style-type: none"> ● Multi-mission Advanced Tactical Terminal (MATT). The MATT sub-project provides near-real-time operational intelligence information from national and tactical sources directly to Special Operations Forces (SOF) aircraft, ground-based units, and eventually maritime elements. The information will provide situational awareness, threat avoidance, and target acquisition, and will support mission planning. The MATT receiver/processor is a miniaturized, UHF, multi-channel receiver. It has embedded communications security and correlation, and programmable capability, including the potential incorporation of advanced cryptographic devices and transmit capabilities, which will transform the MATT into a highly integrated, scalable C4I system. ● Joint Intelligence System Integration. Funds a series of integration efforts to incorporate various SOF intelligence systems on the respective platforms employed by each of the SOF commands. Integration efforts will permit the operation of each intelligence system from within a controlling suite installed aboard a SOF platform without any system or platform degradation. Supports the joint compatibility and interoperability strategy of USSOCOM, as well as ensuring maximum use of Joint Deployable Intelligence Support System (JDISS)-compliant, UNIX-based hardware and software. ● SILENT SHIELD. The SILENT SHIELD is part of an evolutionary Joint Threat Warning System migration being developed to support SOF-wide operations. System development emphasizes a rapid prototyping effort to develop, test and field systems that provide direct threat warning and enhanced situational awareness data to SOF aircrews at the Collateral SECRET level. ● Special Operations Forces Intelligence Vehicle (SOF IV). The SOF IV is a deployable, automated, multi-sources intelligence processing and dissemination system. The SOF IV extends the JDISS-Special Operations Command Research, Analysis and Threat Evaluation System architecture to the Joint Special Operations Task Force level permitting automated interface to all theater-level intelligence data handling systems. SOF IV provides for the receipt, processing and manipulation of near-real-time intelligence data in order to produce highly tailored, accurate and timely intelligence products to support deployed SOF. The system employs a high mobility multi-purpose wheeled vehicle configured with a rigid wall, standard integrated command post shelter to house computer servers, mass storage devices, and communications equipment, and a tent extension for the remote operation of analyst workstations. It incorporates DOD Intelligence Information System and JDISS standards and 		

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	DATE	MARCH 1996
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160405BB Special Operations Intelligence Systems Development / Project S400			
<p>products in accordance with Joint Chiefs of Staff direction.</p> <ul style="list-style-type: none"> ● Tactical Exploitation of National Capabilities (TENCAP). TENCAP is a project to introduce and integrate national systems capabilities into the SOF force structure and operations. TENCAP activities include increasing national systems awareness; demonstrating the tactical utility of national system data; testing technology and evaluating operational concepts in biennial Joint Staff Special Projects; and transitioning promising concepts and technologies into the SOF materiel inventory. 				
<p>ABOVE OPERATIONAL ELEMENT (DEPLOYED)</p> <ul style="list-style-type: none"> ● Multi-mission Advanced Tactical Terminal and Joint Deployable Intelligence Support System-Special Operations Command Research, Analysis, and Threat Evaluation System (JDISS-SOCRATES) are also planned for this level. 				
<p>ABOVE OPERATIONAL ELEMENT (GARRISON)</p> <ul style="list-style-type: none"> ● JDISS-SOCRATES. JDISS-SOCRATES provides a wide range of mission required automated intelligence and imagery support to USSOCOM, component commands and operating forces as well as USCENTCOM and components in-garrison. JDISS-SOCRATES, a Wide Area Network based multi-functional intelligence system, incorporates a variety of computers, data bases, intelligence communication systems, secure phones, facsimile equipment, imagery processing, secondary imagery dissemination and map handling equipment. JDISS-SOCRATES provides SOF with unprecedented access to both national and specially-focused intelligence products, satisfying long-standing intelligence deficiencies identified in all five regional Commander In Chief Theater Intelligence Architectures. Product improvements are focused on integration of emerging intelligence community systems, technology, and standards into the JDISS-SOCRATES architecture. Near-term improvements are focused on implementation of UNIX-based client server environment and integration of Department of Defense Intelligence Information System Management Board directed JDISS standards. 				

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	DATE	MARCH 1996			
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	PE 1160405BB Special Operations Intelligence Systems Development / Project S400					
FY 1995 ACCOMPLISHMENTS:							
<ul style="list-style-type: none"> ● (\$117K) Joint Deployable Intelligence Support System-Special Operations Command Research, Analysis, and Threat Evaluation System (JDISS-SOCRATES). Evaluated and integrated commercial off-the-shelf and government off-the-shelf products for JDISS-SOCRATES enhancements. Investigated means to fully integrate near-real-time data feeds to support mission planning. ● (\$2,008K) Multi-mission Advanced Tactical Terminal (MATT). Performed full operational test and evaluation of Tactical Information Broadcast System receiver module and transition to production. Continued platform integration studies on other SOF platforms. Began development of Hayfield communications security device embedment into MATT Standard Electronic Module-E. ● (\$963K) Joint Intelligence Systems Integration. Completed Triple Receiver engineering change proposal for the SOF SIGINT Manpack System Version 2. Integrated and tested secure satellite communications for PRIVATEER aboard Patrol Coastal ships. ● (\$627K) Tactical Exploitation of National Capabilities. Used Joint Staff Special Project 95 as a vehicle for demonstrating and assessing national technologies to SOF forces. Assessed technology for HAMLET'S FOREST, HAMLET'S TRACK, and SPINNAKER. Provided systems engineering and technical assistance support. ● (\$272K) Special Operations Forces Intelligence Vehicle. Developed operational test and evaluation procedures. 							
FY 1996 PLAN:							
<ul style="list-style-type: none"> ● (\$305K) Joint Intelligence Systems Integration. Develop, downsize, integrate, and test a deployable electronic intelligence package. Provide a multi-scanner/modern modulation intercept capability for testing and evaluation. Continue to integrate 							

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	DATE
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.	MARCH 1996	
RDT&E, DEFENSEWIDE / 7 PE 1160405BB Special Operations Intelligence Systems Development / Project S400			
<p>and test secure satellite communications for PRIVATEER aboard Patrol Coastal ships.</p> <ul style="list-style-type: none"> ● (\$718K) Tactical Exploitation of National Capabilities. Assess technology and operational utility of HAMLET'S FOREST project and provide systems engineering and technical assistance (SETA) support. ● (\$97K) Joint Deployable Intelligence Support System-Special Operations Command Research, Analysis and Threat Evaluation System (JDISS-SOCRATES). Engineering development and technical integration of intelligence migration products into the JDISS-SOCRATES architecture. ● (\$1,439K) Multi-mission Advanced Tactical Terminal (MATT). Continue platform integration efforts and software development. ● (\$284K) SOF SIGINT Manpack System (SSMS). Identify and capture maturing commercial and government off-the-shelf hardware and software functionalities for integration into SSMS: network interface protocol, fiber optic antenna interface, and overall reductions in size, weight, and power requirements. <p>FY 1997 PLAN:</p> <ul style="list-style-type: none"> ● (\$831K) Tactical Exploitation of National Capabilities. Participate in the development and test of the prototype S-band Standard Electronic Module-E based transceiver card for the MATT and the test of secondary imagery receive capability. Continue to assess technology and operational utility of HAMLET'S FOREST project and to provide SETA support. ● (\$290K) SOF SIGINT Manpack System (SSMS). Continue off-the-shelf hardware and software functionalities for integration into SSMS: speaker/language identification, a modern modulation capability, computer assisted search and data base construction, an improved man-machine interface, and overall reductions in size, weight, and power requirements. 			

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		UNCLASSIFIED	DATE	MARCH 1996			
APPROPRIATION / BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE / PROJECT NO.						
APR 1160405BB Special Operations Intelligence Systems Development / Project S400							
<ul style="list-style-type: none"> ● (\$194K) SILENT SHIELD. Integrate and test platform configurations. 							
ACQUISITION STRATEGY:	NA						
B. Program Change Summary							
Previous President's Budget	FY95	FY96	FY97	Total Cost			
Appropriated Value	2.932	2.901	3.443	Cont.			
Adjustments to Appropriated Value / President's Budget	2.958	2.901					
Current Budget Submit	1.029	(.058)	(2.128)				
Change Summary Explanation:	3.987	2.843	1.315	Cont.			
Funding:	FY 1995 funds were realigned to continue the development and integration of SOF SIGINT Manpack System/Multi-mission Advanced Tactical Terminal technologies. FY 1996 decrease for Congressional inflation adjustment and overhead/management savings. FY 1997 decrease is to fund higher priority MFP-11 requirements, to meet fiscal guidance, and is due to repricing of budgets to reflect the Administration's revised economic assumptions forecast.						
Schedule:	SOF Intelligence Vehicle operational test and evaluation extended since the production contract was delayed three months. However, the period of performance did not change.						
Technical:	None.						

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE	
APPROPRIATION / BUDGET ACTIVITY		MARCH 1996	
R-1 ITEM NOMENCLATURE / PROJECT NO. RDT&E, DEFENSEWIDE / 7 PE 1160405BB Special Operations Intelligence Systems Development / Project S400			
C. Other Program Funding Summary			
	FY95	FY96	FY97
PROC, SOF Intel Systems	23.488	25.731	19.833
			FY98
			FY99
			FY00
			FY01
			To Complete
			Total Cost
			Cont.
			Cont.
D. Schedule Profile			
JDISS-SOCRATES Version Upgrades			
Begin Development of Improved SSMs			
SOF IV OT&E			
SILENT SHIELD Integration & Test			

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)		DATE MARCH 1996	
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE PE 1160405BB Special Operations Intelligence Systems Development / Project S400	
A. Project Cost Breakdown (\$ in thousands)		FY95	FY96
1. JDISS-SOCRATES		117	97
2. Joint Intelligence Systems Integration		963	305
3. Tactical Exploitation of National Capabilities		627	718
4. SOF SIGINT Manpack System		284	290
5. Multi-Mission Advanced Tactical Terminal		2,008	1,439
6. SOF Intelligence Vehicle		272	
7. SILENT SHIELD		194	
TOTAL:		3,987	2,843
			1,315

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APPROPRIATION / BUDGET ACTIVITY <small>DEPT OF DEFENSE WIDE</small>	R-1 ITEM NOMENCLATURE	DATE MARCH 1996
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B. Budget Adjustment

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Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY95	Budget FY95	Budget FY96	Budget FY97	Budget to Complete	Total Program
Product Development Organizations										Cont.
SAIC, McLean VA	C/CPFF MIPR	Various	166		539					
NRL, Washington DC	C/CPFF	Various	917							
E-Systems, Greenville TX	C/CPFF	Sep 92	3,960							
Delfin Systems, Santa Clara CA	C/CPFF	Aug 92	1,633							
Delfin Systems, Santa Clara CA	SS/CPFF	Jan 96			559					
USAF, USAF Washington DC	Various		1,950							
Defense, Onl Spcl Ofc, Wash DC	Various				200					
LORAL, Fed Sys, Owego NY	SS/CPFF	Aug 94	10,450							
NRAD, San Diego CA	Various	419								
NISE-E, Charleston, SC	Various				473					
DESA, Kirtland AFB, NM	MIPR									
NSA, Washington, DC	MIPR									
NAWC-AD, St. Inigoes, MD	PA	Dec 95								
E-Systems, Greenville, TX	SS/CPFF	Jul 95								
Miscellaneous	Various	Oct 96								
					13,181					
Support and Management Organizations										Cont.
Booz-Allen & Hamilton	CPFF	Apr 93								
Total and Equivalent Organizations					550					
						210				
							473			
								473		

Government Furnished Property		Contract Method/Type or Funding Vehicle		Award or Obligation Date		Delivery Date		Total Prior to FY95		Budget FY95		Budget FY96		Budget to Complete		Total Program	
Item Description																	
Subtotal Product Development								32,676		3,777	2,370		842		Cont.	Cont.	
Subtotal Support and Mgmt								550		210	473		473		Cont.	Cont.	
Subtotal Test and Evaluation																	Cont.
Total Project								33,226		3,987	2,843		1,315		Cont.	Cont.	

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE MARCH 1996						
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSEWIDE / 7		R-1 ITEM NOMENCLATURE PE 1160407BB SOF Medical Technology Development								
COST (in millions)		FY95	FY96	FY97	FY98	FY99	FY00	FY01	Cost to Complete	Total Cost
PE 1160407BB (SOF Medical Technology Development)		1.663	1.814	1.887	2.035	2.087	2.139	2.192	Cont.	Cont.
\$275, SOF Medical Technology R&D		1.663	1.814	1.887	2.035	2.087	2.139	2.192	Cont.	Cont.

A. Mission Description and Budget Item Justification

Projects provide studies and laboratory prototypes for USSOCOM to link non-system basic research and exploratory development to SOF specific system engineering and manufacturing development and procurement. The focus is on medical technologies, centering on physiologic, psychologic and ergonomic factors affecting the ability of forces to perform their missions.

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UNCLASSIFIED		RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE		MARCH 1996			
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE / PROJECT NO.		PE 1160407BB SOF Medical Technology Development / Project S275					
A. Mission Description and Budget Item Justification									
COST (In Millions)	FY95	FY96	FY97	FY98	FY99	FY00	Cost to Complete		
S275, SOF Medical Technology R&D	1.663	1.814	1.887	2.035	2.087	2.139	2.192		
							Cont.		
							Cont.		

This program provides studies and non-system exploratory advanced technology development. The focus is on medical technologies, centering on physiologic and ergonomic factors affecting the ability of Special Operations Forces (SOF) to perform their missions. Current equipment and technology does not meet force requirements. The unique nature of special operations requires unique approaches to combat casualty care, medical equipment and other life support capabilities including life support for high altitude parachuting, combat casualty swimming and other SOF unique missions. This program addresses the physiologic, psychologic, and ergonomic aspects of all operations and provides guidelines for the development of selection and conditioning criteria, thermal protection, decompression procedures, combat casualty procedures and life support systems. The program supports the development of biomedical enhancements for the unique requirements of all SOF in the conduct of their diverse missions. This effort is defined by the following seven areas of investigation:

- Combat casualty management in SOF operations will: (1) review the emergency medical equipment currently used in the SOF Community and compare this to currently available civilian technology; it will also provide field testing of emergency medical equipment in the adverse environmental conditions encountered in SOF; (2) evaluate current tactical combat casualty care doctrine to ensure consideration of the wide variety of tactical scenarios encountered and apply the latest concepts in casualty care to these circumstances; and, (3) develop CD-ROM based computer programs with voice capability to conduct medical interviews in multiple foreign languages.
- Decompression procedures for Special Operations Forces diving operations will: (1) decrease the decompression obligation in SOF diving operations through the use of surface-interval oxygen breathing; and, (2) investigate pre-oxygenation requirements for high-altitude SOF parachute operations.

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<ul style="list-style-type: none"> ● Exercise-related injuries will evaluate the effectiveness of applying sports medicine diagnostic, therapeutic, and rehabilitative techniques in management of the traumatic and overuse injuries commonly encountered among SOF operators. ● Inhaled gas toxicology will: (1) evaluate the feasibility of using pharmacologic intervention to reduce or eliminate the possibility of central nervous system toxicity; and, (2) study the clinical symptoms experienced when divers are exposed to an elevated partial pressure of carbon dioxide and develop a training protocol to help SOF trainees recognize the early symptoms of carbon dioxide buildup. ● Medical sustainment training techniques will: (1) examine novel ways of both providing and documenting medical sustainment training for SOF corpsmen and physicians; and, (2) develop a system for constantly upgrading the medical expertise of SOF medical personnel by incorporating new research reports and clinical information into a CD-ROM base computer system which can be used by medical personnel in isolated duty circumstances. ● Mission-related physiology will: (1) develop accurate measures to evaluate SOF mission-related performance; (2) evaluate the suitability of Photorefractive Keratectomy, a new refractive surgical procedure, for special operations personnel; (3) delineate nutritional strategies designed to help personnel apply known nutritional concepts to optimize performance in mission and training scenarios; (4) evaluate potential ergogenic agents as they apply to enhancing mission-related performance; (5) study the safety and efficacy of using caffeine to increase performance in sustained operations; (6) develop a quantitative test for night vision suitable for screening SOF candidates and study ways to enhance unaided night vision; (7) develop techniques for using oxygen to increase breathhold dive time; and, (8) study pharmacologic measures to prevent acute mountain sickness in high terrestrial SOF operations. ● Thermal protection will: (1) conduct a survey of available thermal protection garments and conduct a comparative study to determine their relative effectiveness at protecting personnel engaged in small boat operations; and, (2) evaluate the efficacy of current thermal protective measures in maintaining combat swimmer performance. 		

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FY 1995 ACCOMPLISHMENTS:

- (\$1,272K) Continued ongoing studies as follows: SOF Computer-Assisted Medical Reference System; Computer-Based SOF Corpsman Training Program; Quantification of SOF Mission-Related Performance; Excimer Laser Photorefractive Keratectomy in SOF Personnel; Exercise-Related Injury Program; Hypercarbia Recognition Training; SOF Maximum Performance Nutrition Manual; Special Operations Medical Translator; Combat Casualty Care in Special Operations; Combat Casualty Equipment Review; Surface Interval Oxygen Repetitive Dive Tables; Prophylactic Measures for Central Nervous System (CNS) Oxygen Toxicity; Night Vision Enhancement.

- (\$391K) Initiated new studies: Sustained Operations Performance Enhancement with Caffeine; Pre-Oxygenation Requirements for High Altitude Parachute Operations; Thermal Protection in SOF Small Boat Operations; Ergogenics in Special Operations; and Validation of Surface Interval Oxygen Dive Tables.

FY 1996 PLAN:

- (\$1,350K) Continue ongoing studies as follows: SOF Computer-Assisted Medical Reference System; Computer-Based SOF Corpsman Training Program; Quantification of Mission-Related Performance; Excimer Laser Photorefractive Keratectomy in NSW Personnel; Tactical Combat Casualty Care in Special Operations; Combat Casualty Equipment Review; Air/0.7 Atmosphere Absolute Decompression; Thermal Protection in Small Boat Operations; Ergogenics (Performance Enhancing Agents) in SOF Operations; Performance Enhancement with Caffeine; Pre-Oxygenation Requirements in High Altitude Low Opening/High Altitude Parachute Operations; Night Vision Enhancement; and, Hypercarbia Recognition Training.
- (\$464K) Initiate new studies such as: Thermal Protection and Diver Performance in SOF Combat Swimmers; Laser Eye Protection in Special Operations; Reduction of Oxygen Toxicity Risk with Modified Draeger LAR V Operating Procedures; SOF Physical Fitness Guide.

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FY 1997 PLAN:																									
<ul style="list-style-type: none"> ● (\$1,446K) Continue ongoing studies as follows: SOF Computer-Assisted Medical Reference System; Computer-Based Corpsman Training Program; Quantification of Mission-Related Performance; Combat Casualty Equipment Review; Ergogenics (Performance Enhancing Agents) in Special Operations; Laser Eye Protection in Special Operations; Thermal Protection and Diver Performance in Special Operations Forces (SOF) Combat Swimmers; Combat Casualty Care in SOF Operations; Excimer Laser Photorefractive Keratectomy in SOF Personnel; Night Vision Enhancement; Pre-Oxygenation Requirements in High Altitude Low Opening Operations; SOF Physical Fitness Guide; Air/0.7 Atmosphere Absolute Decompression; Reduction of Oxygen Toxicity Risk with Modified DRAEGER LAR V Operating Procedures. ● (\$441K) Initiate new studies such as: Immune Function of Basic Underwater Demolition/SEAL Training; Cold Stress in Current Special Operations; Draeger LAR V Canister Limits for SEAL Delivery Vehicle (SDV) Operations; and Cold Water Immersion and SDV Performance. 																									
ACQUISITION STRATEGY: NA																									
<p>B. Program Change Summary</p> <table> <tbody> <tr> <td>Previous President's Budget</td> <td>FY95</td> <td>FY96</td> <td>FY97</td> <td>Total Cost</td> </tr> <tr> <td>Appropriated Value</td> <td>1.782</td> <td>1.891</td> <td>2.377</td> <td>Cont.</td> </tr> <tr> <td>Adjustments to Appropriated Value / President's Budget</td> <td>1.798</td> <td>1.891</td> <td></td> <td></td> </tr> <tr> <td>Current Budget Submit</td> <td>(.119)</td> <td>(.077)</td> <td>(.490)</td> <td></td> </tr> <tr> <td></td> <td>1.663</td> <td>1.814</td> <td>1.887</td> <td>Cont.</td> </tr> </tbody> </table>	Previous President's Budget			FY95	FY96	FY97	Total Cost	Appropriated Value	1.782	1.891	2.377	Cont.	Adjustments to Appropriated Value / President's Budget	1.798	1.891			Current Budget Submit	(.119)	(.077)	(.490)			1.663	1.814
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Change Summary Explanation:

Funding: FY 1995 decrease for Congressional reduction of Defensewide RDT&E for travel, civilian pay and a directed Department of Energy reprogramming, and assessments to execute mandated programs. The FY 1996 decrease for Congressional inflation adjustments and overhead/management savings. The FY 1997 decrease is to fund higher priority MIFP-11 requirements, to meet fiscal guidance, and due to revised OMB economic assumptions to support the Bosnia reprogramming.

Schedule: None.

Technical: None.

C. Other Program Funding Summary None.

D. Schedule Profile NA.

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